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(57) Abstract: A method enabling a customer to purchase a lottery ticket includes receiving a tender amount from a customer as part of a transaction in which the customer provides payment for goods or services having a computed price and determining an amount of change due to the customer, which will typically be the tender amount offered by the customer less the computed price for the goods or services purchased by the customer. The method also includes (i) offering the customer an opportunity to obtain a lottery or other game or chance ticket, the price of which is preferably based, at least in part, on the amount of change due the customer, (ii) determining the customer's acceptance or non-acceptance of the offer made to the customer for the lottery ticket, and (iii) providing a lottery ticket to the customer if the customer accepts the offer for the lottery ticket. The method can be implemented on a per-store or multi-store basis and includes the ability to adjust the prices of lottery tickets offered to customers, the percentage chance of each lottery ticket being a winning lottery ticket, and/or the amount or value of a monetary or non-monetary prize associated with each winning lottery ticket.

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## **METHOD AND APPARATUS FOR CONDUCTING A LOTTERY TICKET TRANSACTION**

### **CROSS-REFERENCE TO RELATED INVENTION**

5           This application is a continuation-in-part of pending U.S. Patent Application  
Serial No. 08/822,709 entitled "System and Method for Performing Lottery Ticket  
Transactions Utilizing Point-of-Sale Terminals" and filed March 21, 1997, with the  
U.S. Patent and Trademark Office.

### **BACKGROUND OF THE INVENTION**

#### **Field of the Invention:**

          The present invention is directed to a method and apparatus for enabling lottery  
ticket transactions and, more specifically, to a method and apparatus for selling  
dynamically priced lottery tickets.

#### **Description of the Prior Art:**

15           Local, state, regional, and national level lotteries have been conducted for many  
years. In recent years, as part of efforts to increase revenues attributed to lottery ticket  
sales, many states have begun to offer "scratch-off" style or other instant win lottery  
games. This type of game typically involves the sale of a paper or cardboard game  
ticket to a player or store customer. In most cases, a player actively uncovers a portion  
20 of the game ticket concealed by a latex covering to reveal combinations of symbols or  
values. Certain combinations of symbols or values correspond to winning game tickets  
having associated prizes which may be provided to a player by a participating lottery  
merchant.

          The appeal of instant win style lottery games is largely based on the instant  
25 gratification aspect of such lottery games. Once a player purchases a ticket, the player  
can immediately determine the outcome corresponding to the ticket and, if the ticket is  
a winning ticket, the player can usually claim any resultant prize where the player

purchased or acquired the ticket. However, the accessibility of such games of chance can be limited. Lottery transactions, during which a customer purchases a lottery ticket, are often performed after or separate from a customer's primary or merchandise transaction, during which the customer purchases or pays for goods and/or services, thereby adding additional time to the customer's overall transaction process or time spent in a store. In fact, within many retail environments, customers must initiate an entirely separate transaction at an entirely separate area of the store, such as a customer service desk, simply to purchase a lottery ticket or to conduct a lottery ticket transaction. Thus, the added elements of time and effort required by customers in order for customers to purchase lottery tickets may detract from potential customers' participation in such games of chance, thereby reducing profits of a store providing the lottery tickets for sale to customers or a lottery organization conducting or overseeing the lottery. When lottery organizations and retailers provide lottery tickets to customers in a manner requiring less customer effort, such as by combining a merchandise transaction and a lottery ticket transaction into a single customer transaction, both parties realize additional revenue, and thus, additional profits as a result of increased lottery ticket sales.

Previously, applicants have disclosed several novel methods of providing a customer with a supplementary product offer based at least in part on the amount of funds due to a customer resulting from a particular merchandise transaction. More particularly, applicants have disclosed several methods for determining an appropriate supplementary product sale opportunity to be presented to a customer based on an amount of change due to the customer during a merchandise transaction. The disclosed methods provide several benefits to merchant parties seeking to increase revenues as well as customers who do not wish to be bothered with cumbersome or otherwise unappealing spare change or loose coins.

One such particular method is disclosed by commonly owned, co-pending United States Patent Application Serial No. 08/822,709, filed March 21, 1997, and entitled "System and Method for Performing Lottery Ticket Transactions Utilizing Point of Sale Terminals," the full disclosure of which is herein incorporated by  
5 reference. The disclosed system allows a retailer to provide a customer with a partial, or "fractional" lottery ticket. According to one aspect of the disclosed system, the fractional lottery ticket is provided based on the resultant value of coins due to a customer following a transaction. For example, a customer tendering a five-dollar bill in exchange for a purchase having a total price of \$4.42 would be entitled to an offer for  
10 a fractional lottery ticket in the amount of fifty-eight cents ( $\$5.00 - \$4.42 = \$0.58$ ). When based on lottery systems wherein single-use lottery tickets are provided to the customer at a price of one dollar, a winning lottery ticket having a price of fifty-eight cents would entitle the ticket holder to fifty-eight percent of the corresponding jackpot. Although the disclosed system provides an effective and advantageous way to process  
15 "Lotto" style lottery ticket transactions at a point-of-sale, further advantages may be realized as described herein by using a lottery ticket transaction processing method and apparatus capable of providing an immediate monetary or non-monetary benefit or prize to a customer, in conjunction with the customer's primary merchandise transaction, which may be conducted at a point-of-sale terminal or remotely via an  
20 online ordering system.

### SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide a method and apparatus for enabling lottery tickets to be offered for sale or sold to customers at a point-of-sale terminal or via a computer or other communications network.  
25 To achieve the foregoing and other objects and in accordance with the purposes of the present invention, as embodied and broadly described herein, a method for enabling a customer to purchase a lottery ticket comprises computing a price for a

lottery ticket based, at least in part, on an amount of change due to a customer;  
providing the customer with an offer to purchase the lottery ticket at the computed  
price; receiving from the customer an acceptance of the offer to purchase the lottery  
ticket at the computed price; and providing the lottery ticket to the customer.

- 5           To additionally achieve the foregoing and other objects and in accordance with  
the purposes of the present invention, as embodied and broadly described herein, a  
method for enabling a sale of a lottery ticket to a customer entitled to receive an amount  
of change includes establishing a desired average price per lottery ticket for a group of  
lottery tickets to be offered for sale; establishing at least one of a minimum price and a  
10   maximum price for each lottery ticket in the group of lottery tickets such that an actual  
average price per lottery ticket for the group is not less than the desired average price.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

#### **In the Drawings:**

- Figure 1 is a flowchart of a method in accordance with the present invention;
- 15           Figure 2 is a diagram of a representative configuration of lottery servers, store  
servers, point-of-sale terminals, and client devices with which the method of Figure 1  
may be used;
- Figure 3 is a block diagram illustrating a representative lottery server of Figure  
2;
- 20           Figure 4 is a tabular representation of a possible implementation of the ticket  
database of the lottery server of Figure 3;
- Figure 5 is a block diagram illustrating a representative store server of Figure 2;
- Figure 6 is a tabular representation of a possible implementation of the  
inventory database of the store server of Figure 5;
- 25           Figure 7 is a tabular representation of a possible implementation of the  
transaction database of the store server of Figure 5;

Figure 8 is a block diagram illustrating a representative point-of-sale terminal of Figure 2;

Figure 9 is a flowchart illustrating an exemplary implementation of a more detailed embodiment of the method of Figure 1;

5        Figure 10 is a flowchart illustrating an exemplary implementation of the operation of the store server of Figure 5; and

Figures 11A and 11B are a flowchart illustrating an exemplary implementation of the operation of the point-of-sale terminal of Figure 8.

#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

10        A method 100 in accordance with the principles of the present invention is illustrated in Figure 1 and allows for the sale of lottery tickets to customers as part of a customer's merchandise transaction, during which the customer pays for or purchases goods and/or services, so that the customer does not have to conduct a lottery ticket transaction to purchase a lottery ticket separate from the merchandise transaction.

15        Winning lottery tickets sold to customers may have monetary or non-monetary prizes, or both, associated therewith. The method 100 illustrated in Figure 1 includes a step 102 during which a tender amount is received from a customer as part of a merchandise or other transaction in which the customer provides payment for one or more goods or services having a computed total price, a step 104 during which an amount of change or

20        coins due the customer is determined or computed and which will typically be the tender amount offered by the customer less the computed total price for the goods or services, a step 106 during which the customer is offered an opportunity to purchase or otherwise obtain at least one lottery or other game or chance ticket, the price or cost of which is preferably based, at least in part, on the amount of change or coins due the

25        customer as determined during the step 104, a step 108 during which the customer's acceptance or nonacceptance of the offer made during the step 106 is received or determined, and a step 110 during which at least one lottery ticket offered to the

customer during the step 106 is provided to the customer if a determination is made during the step 108 that the customer has accepted the offer to purchase the lottery ticket made during the step 106. Each of the steps 102, 104, 106, 108, 110 of the method 100 will be discussed in further detail below.

5           A significant advantage provided by the method 100 of the present invention is that the lottery ticket offered to a customer during the step 106 may have a variable or fractional price determined or based on the amount of change or coins due a customer as computed during the step 104. For example, suppose a customer in a supermarket purchases items having a total price, including tax, of \$8.43. If the customer pays with  
10   a ten-dollar bill, *i.e.*, offers a tender amount of ten dollars, during the step 102, the amount of change due the customer as determined during the step 104 will be \$1.57. During the step 106, the supermarket can offer the customer an opportunity to purchase a lottery ticket for \$1.57, thereby eliminating the need to provide any change to the customer. Alternatively, or in addition, the supermarket might offer the customer an  
15   opportunity to purchase a different lottery ticket for fifty-seven cents so that the supermarket does not have to provide coins or loose change totaling fifty-seven cents to the customer. The customer may also consider the elimination of coins or any change provided by the supermarket to the customer to be a benefit. Of course, the supermarket can offer the customer an opportunity to purchase more than one lottery  
20   ticket and the prices for the lottery tickets offered by the supermarket can have many different values which are not necessarily limited to the amount of change or the total value of coins due to the customer.

          Since the cost or price of a lottery ticket might vary, the value of a prize associated with the lottery ticket if the lottery ticket is a winning ticket, might also vary.  
25   For example, a person holding a winning lottery ticket that had a price of one dollar might be entitled to receive fifty dollars. However, a person holding a winning lottery



ticket that had a price of only fifty cents, *i.e.*, one-half of one dollar, might be entitled to receive only twenty-five dollars, *i.e.*, one half of fifty dollars.

The lottery ticket sold or offered for sale to a customer can be any kind of lottery ticket, game ticket, lotto ticket, etc. However, the method 100 of the present invention is particularly well suited for the sale of "instant" win style games or scratch-off game tickets where a customer can determine immediately if a purchased lottery ticket is a winning ticket and/or what the customer has won. In an instant win style game, the customer usually does not need to wait until a "lotto" style posting of winning number combinations is made or announced. A winning instant win style lottery ticket may entitle the customer to receive a monetary prize or a non-monetary prize, or both. Further, the customer may be able to redeem the instant win style lottery ticket in the store where the customer purchased the instant win style lottery ticket perhaps only moments after purchasing the instant win style lottery ticket.

Another significant advantage provided by the method 100 of the present invention is that the lottery ticket offered to a customer during the step 106 can have many different kinds of prizes associated with them. For example, a winning lottery ticket might have a "win value" or prize of one hundred dollars. Alternatively, a winning lottery ticket may entitle the holder to receive four free pizzas or a specific item from the store in which the winning ticket was purchased. A store with excess inventory or soon-to-expire inventory, such as perishable goods or food products, might associate such excess inventory or perishable goods with winning lottery tickets. For example, a store might have four packages of chicken that the store will be unable to sell after three days. The store might then associate a package of the chicken with one or more winning lottery tickets. In this way, the store allows a customer to win products in a manner that generates good will toward the store on behalf of the customer, while at the same time the store disposes of the excess and eventually perishable packages of chicken in a way that reduces losses to the stores and, in fact,

allows the store potentially to make a profit from the sale of the lottery tickets to customers, even if the packages of chicken are given away, depending on the number of lottery tickets sold. For example, assume the store has four packages of chicken to give away, each of which packages of chicken has a cost to the store of three dollars. If the store sells twenty lottery tickets for a total of twenty dollars, four of which lottery tickets entitle the winner to a package of chicken, the store has made twenty dollars while giving away twelve dollars worth of chicken. At the very least, the random lottery game enables the store to prevent a dilution or loss of the value of the packages of chicken. That is, if the store merely throws away the packages of chicken upon their expiration dates, the store may not recoup any costs associated with purchasing the packages of chicken and maintaining the packages of chicken in inventory. However, if the store is able to give away the packages of chicken prior to their expiration dates, the store generates good will, income from lottery ticket sales, etc., that reduces or even prevents a dilution or loss by the store of the value of the packages of chicken.

A further significant advantage provided by the method 100 of the present invention is that the method 100 allows for fractionalized lottery tickets that can be dynamically priced and offered to customers while the customer is completing a merchandise transaction or is otherwise paying for goods and services previously received or taken by the customer or to be received or taken by the customer. Therefore, the customer does not need to conduct both a merchandise transaction for the goods and services and a lottery ticket transaction in order to acquire a lottery ticket. The customer's merchandise transaction and the customer's lottery ticket transaction are combined into a single customer transaction. The method 100 allows a lottery ticket to be offered for sale to a customer via a point-of-sale device or terminal while the customer is conducting a merchandise transaction or completing a payment in a store. Alternatively, the lottery ticket may be offered for sale to a customer via a computer network if the customer is conducting a merchandise transaction or

completing a payment remotely or in an online fashion. The computer network might be the Internet, the World Wide Web, or some other public or private computer or communications network or intranet, as will be described in further detail below.

Still another significant advantage provided by the method 100 of the present invention is that the value of the prizes associated with winning lottery tickets can be monitored or controlled, either for an individual store or for a collection or group of stores, such that the stores and/or another entity implementing the method 100 can be guaranteed to make a profit or such that the store or other entity can adjust the odds or probability of winning or the value of winning as desired by the store such that the store can maintain profitability even when the odds or probability of winning are changed. For example, in the example discussed above wherein a store has four excess packages of chicken, the store may increase: (i) the odds or percentage chance of winning for tickets associated with the packages of chicken; (ii) the price of lottery tickets; and/or (iii) the number of packages of chicken associated with a winning lottery ticket. This improves the store's chances of disposing of the packages of chicken or otherwise providing the packages of chicken to customers in a manner that is both beneficial to customers and the store. As the deadline beyond which the store cannot legally sell the packages of chicken or beyond the expiration date of the packages of chicken approaches, the "attractiveness" of offers made to customers may increase. For example, the price of a lottery ticket may decrease or the probability of winning may increase. A decrease in the price of such a lottery ticket may mean that a predetermined change amount must be due to a customer in order for the customer to be able to receive an offer for the lottery ticket. However, the lower priced lottery ticket can still be offered for sale to a customer to whom a higher amount of change is due, thereby increasing the number of customers to whom the lottery ticket is offered for sale and increasing the chances that the lottery ticket will be sold.

As another example, a store may set the odds or probability of winning for each lottery ticket in a group of lottery tickets available for sale to customers, the price of each lottery ticket, or the win or prize values associated with winning lottery tickets such that the store expects to make a predetermined or expected profit or loss after all of the lottery tickets are sold. More specifically, a store could sell a set of lottery tickets at seventy-five cents each, a subset of which may be winning lottery tickets. By setting or adjusting (i) the number or ratio of winning and non-winning lottery tickets in the set of all lottery tickets available for sale; (ii) the price for which the lottery tickets may be sold to customers; and/or (iii) the win or prize value associated with each winning lottery ticket in the subset of winning lottery tickets, the store can create a predetermined or expected profit or loss for the store after all of the lottery tickets are sold. In addition, the store may still associate monetary prizes to some winning lottery tickets and non-monetary prizes to other winning lottery tickets as needed or desired.

Each of the advantages of the method 100 discussed above, as well as other advantages and benefits provided by the method 100, will be discussed in further detail below.

Now referring to Figure 2, a representative configuration 120 of a computer or communications network 122 having servers, client devices, terminals, etc., connected thereto or associated therewith, is illustrated for purposes of further elaboration, but not limitation, of the method 100 of the present invention. The configuration 120 includes a lottery server 124 and a lottery server 126, either or both of which may control or monitor the sale of lottery tickets by one or more stores or other lottery ticket outlets. Store servers, such as the store servers 128, 130, 132, 134, may be associated with or connected directly to the lottery servers 124, 126 via, e.g., telephone or other dial up lines, cellular or radio networks (not shown), or indirectly via the communications network 122 as illustrated in Figure 2. The store server 128 is illustrated as having three point-of-sale terminals 135, 136, 138 associated with it or connected thereto,

while the store server 130 is illustrated as having two point-of-sale terminals 140, 142 associated with it or connected thereto and the store server 132 is illustrated as having one point-of-sale terminal 144 associated with it or connected thereto. Other devices, such as the client devices 146, 148 may also be associated with or connected to the computer network 122 in order to enable interaction and communication between customers located at or using the client devices 146, 148, the lottery servers 124, 126, and/or the store servers 128, 130, 132, 134, as will be discussed in further detail below.

In general, the lottery servers 124, 126 may function to coordinate and implement one or more lottery operations. The lottery servers 124, 126 may be operated or controlled by a government agency or a private entity that operates, oversees, or runs a lottery. The lottery servers 124, 126 are preferably used to store, generate, transmit, and receive information relating to the allocation, availability, price, and sale of lottery tickets. In addition, the lottery servers 124, 126 may store, generate, alter, transmit, and receive information regarding individual lottery ticket status and the prize amount, either monetary or non-monetary, associated with each winning lottery ticket.

The lottery servers 124, 126 are preferably in communication with the store servers 128, 130, 132, 134 so that records or information regarding available lottery tickets, lottery ticket identification, lottery ticket prices, the monetary or non-monetary prizes or premiums associated with each winning lottery ticket, etc. can be shared by and between the lottery servers 124, 126 and the store servers 128, 130, 132, 134 or transmitted between the lottery servers 124, 126 and the store servers 128, 130, 132, 134.

The store servers 128, 130, 132, 134 are preferably in communication with the point-of-sale terminals 135, 136, 138, 140, 142, 144 such that purchase or transaction information can be communicated or transmitted between the point-of-sale terminals 135, 136, 138, 140, 142, 144 to the store servers 128, 130, 132, 134 and, if desired or

necessary, to the lottery servers 124, 126. In a typical implementation, a store will have one or more point-of-sale terminals which will be connected to one or more store servers. A store may have one or more store servers located on its premises and/or some or all of the store servers may be located remotely from the point-of-sale terminals. A customer conducting a merchandise transaction at a store may have a total amount due for products or services being purchased at the store computed by or at a point-of-sale terminal. The point-of-sale terminal may interact with a store server to track inventory, to store information on each merchandise transaction, etc. If the customer is purchasing a lottery ticket as part of the customer's merchandise transaction, communication may occur between the point-of-sale terminal and one or more store servers or lottery servers to determine the availability of unsold lottery tickets or to otherwise facilitate the lottery ticket sale or transaction, as will be discussed in further detail below.

Now referring to Figure 3, a block diagram of a basic lottery server, such as the lottery server 126 is illustrated. The lottery server 126 may include a processor or controller 150 that uses or includes one or more communications ports 152 for connecting to or communicating with the store servers 128, 130 and the computer network 122. In addition, the lottery server 126 may include internal memory or memory storage, such as a random access memory (RAM) 154 or a read only memory (ROM) 155, for storing information, programs, databases, operating systems, and like elements. An internal clock element 156 may also be included within the lottery server 126 to maintain an accurate time and date for the lottery server 126. The lottery server 126 may also include a hardware or software based random number generator (not shown) to assist in generating numbers used in determining lottery ticket outcomes or results.

The lottery server 126 may include one or more input devices 157, such as a bar code reader, an image scanner, a roller ball, a touch pad, joy stick, a computer

keyboard, or a computer mouse. In addition, the lottery server 126 may include one or more output devices 159, such as a printer, a display screen or monitor, a text to speech converter, etc. Software may be resident and operating or operational on the lottery server 126. The software may be stored on a data storage device 160 and include a  
5 control program 161 and an optional ticket database 162. The ticket database 162 may be used to generate, receive, transmit, and/or store any information related to lottery tickets, such as lottery ticket availability, lottery ticket identifications, lottery ticket prices, the monetary or non-monetary prizes or premiums associated with each winning lottery ticket, etc. In some configurations, the ticket database 162 will store  
10 information regarding all lottery tickets available for sale.

As will be discussed in further detail below, all or subsets of the information in the ticket database 162 stored on a lottery server might also be stored on one or more store servers in offer databases for use by the store servers during sale of a lottery ticket to a customer. Whereas a ticket database might store information on all lottery tickets  
15 available for sale, an offer database located on a store server might store information regarding only the specific subset of lottery tickets available from a store using the store server. In this scenario, the lottery tickets available from a single store form a subset of all available lottery tickets.

One potential implementation of the ticket database 162 is illustrated in Figure  
20 4. The ticket database 162 illustrated in Figure 4 includes an identification field 164 which may include identification information for at least six lottery tickets (*i.e.*, lottery tickets "T 1250," "T 1251," "T 2684," "T 2685," "T 3975" and "T 3976"), a lottery ticket outcome field 165 which may include information as to whether or not each of the six lottery tickets is a winning or losing lottery ticket, a lottery ticket price field 166  
25 which may include price information for each of the six lottery tickets (*e.g.*, the lottery ticket "T 1250" is priced at forty-six cents while the lottery ticket "T 3975" is priced at ninety-three cents), a ticket prize or premium field 167 which may include information

regarding the prize or premium associated with the two winning tickets "T 2684" and "T 3975," and a ticket status field 168 which may include information as whether each of the six tickets is sold or unsold. As shown by this example of a ticket database, the lottery tickets "T 1250," "T 1251," "T 2684," "T 2685" and "T 3975" have all been  
5 sold while the lottery ticket "T 3976" remains unsold. The winning lottery ticket "T 2684" has a win value or associated ticket premium or prize of two dollars while the winning lottery ticket "T 3975" has a win value or associated ticket premium or prize of fifty dollars. Each of the four lottery tickets "T 1250," "T 1251," "T 2685" and "T 3976" are losing lottery tickets, thereby having no win value or a zero win value. Note  
10 that instead of, or in conjunction with, a monetary prize or premium associated with either of the winning lottery tickets "T 2684" or "T 3975," a non-monetary prize or premium, such as one or more cans of chicken noodle soup or packages of chicken, could be associated with the winning lottery tickets. The creation and use of the ticket database 162 will be discussed in further detail below.

15 Now referring back to Figure 2, store servers, such as the store servers 128, 130, 132, 134 are preferably used to receive, transmit, and store data relating to customer transactions, store inventory, and lottery tickets available at or from the store. A block diagram of a basic store server, such as the store server 128, is illustrated in Figure 5.

In a similar fashion to the lottery server 124, the store server 128 may include a  
20 processor or controller 170 that uses or includes one or more communications ports 172 for connecting to or communicating with the lottery server 126 and the point-of-sale terminals 135, 136, 138. In addition, the store server 128 may include internal memory or memory storage, such as a random access memory (RAM) 174 or a read only memory (ROM) 176, for storing information, programs, databases, operating systems,  
25 etc. An internal clock element 178 may also be included within the store server 128 to maintain an accurate time and date for the store server 128.



The store server 128 may also include one or more input devices 180, such as a bar code reader, an image scanner, a roller ball, a touch pad, a joy stick, a computer keyboard, or a computer mouse. In addition, the store server 128 may include one or more output devices 182, such as a printer, a display screen or monitor, a text to speech converter, etc. Software may be resident and operating or operational on the store server 128. The software may be stored on a data storage device 184 and may include a control program 186, an optional inventory database 188, an optional transaction database 190, and an optional offer database 192. The store server 128 may also include a hardware or software implemented random number generator (not shown) to assist in generating numbers used in determining lottery ticket outcomes or results.

The inventory database 188 may be used to generate, receive, transmit, and/or store records or information relating to inventory within one or more specific stores. The information may include information relating to product family (*e.g.*, produce, health products, office products, lottery tickets, etc.), product description (*e.g.*, sixteen ounce bottle of brand XYZ shampoo, six pack of soda, etc.), product availability, product price, etc. One potential implementation of the inventory database 188 is illustrated in Figure 6. The inventory database 188 illustrated in Figure 6 includes a product identifier field 194 which may include identification information for products, a product family field 196 which may include general descriptive information about the products, a product description field 198 which may include more specific information about the products, an available quantity field 200 which may include product availability information, and a product price field 202 which may include product price information. Note that the inventory database 188 illustrated in Figure 6 includes lottery ticket information indicating or referring to the lottery tickets available for sale as part of a customer transaction.

The transaction database 190 may be used to generate, receive, transmit, and/or store information relating to one or more transactions that may occur at a store, wherein

a customer purchases or pays for between one and some finite number N of products or services, one or more of which may be a lottery ticket. The transaction database 190 may also include a subtotal amount for the products and services paid for by the customer, as well as an after tax purchase total.

5           One potential implementation of the transaction database 190 is illustrated in Figure 7. The transaction database 190 illustrated in Figure 7 may include a transaction identifier field 204 which may include identification information for a specific transaction, a point-of-sale terminal field 206 which may include identification information regarding a specific point-of-sale terminal at which the transaction  
10 identified in the field 204 took place, a transaction date/time field 208 which may include date and time information for the transaction identified in the field 204, product purchased fields 210, 212, 214, each of which may list or identify a product purchased during the transaction identified in the field 204, a subtotal field 216 which may include information regarding a pretax subtotal for the products identified in the fields 210,  
15 212, a post-tax subtotal field 218 which may include information regarding a post-tax subtotal for the products identified in the field 210, 212, and a final purchase total field 220 which may include information regarding the total cost for the products identified in the fields 210, 212, 214.

          The single transaction represented in the transaction database 190 illustrated in  
20 Figure 7 has a transaction identifier of "12345" in the transaction identifier field 204. The "12345" transaction occurred on Friday, May 21, 1999, at 1:58 p.m. according to the entry in the transaction date/time field 208. In addition, the "12345" transaction took place at the point-of-sale terminal identified as "08" in the point-of-sale terminal identification field 206. Note that the products "GR 001" and "PR 002" identified in  
25 the product purchased fields 210, 212, respectively, are also listed in the product identifier field 194 in the inventory database 188 illustrated in Figure 6. As illustrated in Figure 6, the products identified "GR 001" and "PR 002" have prices of \$2.39 and

\$0.89, respectively, for a pretax total of \$3.28, the subtotal provided in the subtotal field 216 in the transaction database 190 illustrated in Figure 7, and a post tax total of \$3.48, the subtotal provided in the field 218 in the transaction database 190 illustrated in Figure 7. Assuming the lottery ticket "LT 052" identified in the product purchased  
5 field 214 in the transaction database 190 illustrated in Figure 7 has a cost of fifty-two cents, the total post-tax cost of the products "GR 001," "PR 002," and "LT 052" illustrated in the transaction database 190 of Figure 7 is four dollars, the figure indicated in the final purchase total field 220.

The offer database 192 may be used to generate, receive, transmit, and/or store  
10 information relating to lottery tickets sold or offered for sale by one or more stores. The offer database 192 may be a part or subset of, or a full copy of, the ticket database 162 described above. In general, however, the offer database 192 will form a subset of the ticket database 162 such that the offer database 192 stores information on only a  
15 subset of available lottery tickets while the ticket database 162 stores information on all or a larger set of lottery tickets. For an offer database associated with a particular store or store server, the offer database 192 may include a list of lottery ticket inventory for the store or the lottery tickets available for sale by the store, unique identifiers for the lottery tickets, lottery ticket availability or price, an indication of whether or not each  
20 lottery ticket is a winning lottery ticket, a description of monetary or non-monetary prize associated with each winning lottery ticket, status information for each lottery ticket (*i.e.*, whether or not the lottery ticket has been sold), and perhaps even the contents or details of offers made during operations of the step 106.

Now referring back to Figure 2, point-of-sale terminals, such as the point-of-sale terminals 135, 136, 138, 140, 142, 144, are used in stores, such as supermarkets,  
25 restaurants, clothing stores, dry-cleaners, etc. to create or determine a subtotal corresponding to a customer's purchases or orders and a total which may include taxes, delivery charges, customization charges, etc. More specifically, the point-of-sale

terminals 135, 136, 138, 140, 142, 144 are operable to receive, determine and output information corresponding to or associated with one or more products or services being paid for by a customer. For example, the point-of-sale terminals 135, 136, 138, 140, 142, 144 may be, or used like, cash registers to determine the total price, pretax and/or post tax, to be paid by the customer for the products and/or services purchased or ordered by the customer. One possible device that could be used with appropriate modifications for any of the point-of-sale terminals 135, 136, 138, 140, 142, 144 is the TeamPOS™ 5000 terminal manufactured by ICL Retail Systems.

A block diagram of a basic terminal, such as the point-of-sale terminal 135 is illustrated in Figure 8. The point-of-sale terminal 135 may include a processor or controller 230 that uses or includes one or more communications ports 232 for connecting to or communicating with the store server 128 or to the communications network 122. In addition, the point-of-sale terminal 135 may include internal memory or memory storage, such as a random access memory (RAM) 234 or a read only memory (ROM) 236, for storing information, programs, operating systems, and like elements. An internal clock element 238 may also be included within the point-of-sale terminal 135 to maintain an accurate time and date for the point-of-sale terminal 135.

The point-of-sale terminal 135 may also include one or more input devices 240, such as a bar code reader, an image scanner, a roller ball, a touch pad, a joy stick, a computer keyboard, or a computer mouse. In addition, the point-of-sale terminal 135 may include one or more output devices 242, 244, such as a printer, a display screen or monitor, a text to speech converter, etc. Software may be resident and operating or operational on the point-of-sale terminal 135. The software may be stored or resident on a data or mass storage device 246 and may include a control program 248.

Now referring back to Figure 1, each of the steps 102, 104, 106, 108, 110 of the general method 100 will now be discussed in further detail, particularly with use of some devices illustrated in the configuration 120. As previously discussed above, the

method 100 typically forms a part of a merchandise transaction during which a customer purchases, orders, or otherwise pays for one or more goods or services. A customer may be purchasing *e.g.*, apparel or clothing items, pool cleaning services, perishable goods, books, or hotel reservations. The customer may be purchasing such goods in a store or remotely by logging into or otherwise accessing a store's World Wide Web site or online or mail-order catalog system. For example, a customer may purchase books at a traditional bookstore while the customer is physically at the bookstore. Alternatively, the customer may purchase the books from the bookstore by calling the bookstore from a remote location and placing an order for the books. As another alternative wherein a customer uses online or remote access to conduct or initiate a merchandise transaction, the customer may log into or access a bookstore's Web site or Web home page, which may be hosted on, served from, or part of a store server, such as the store server 134 or the store server 132, and order the books online from a terminal or client device, such as the client device 146. It is specifically contemplated that the method 100 will operate in accordance with each of these scenarios.

When a customer is purchasing or paying for goods or services as part of the customer's merchandise transaction, a total for the goods is typically computed or prepared for the customer for the customer's review or convenience. The total may or may not include taxes, delivery charges, etc. If the customer is in a store purchasing goods, the customer's purchase total may be computed by a point-of-sale device, such as the point-of-sale terminal 140. If the customer is purchasing goods via a telephone call to the store, the customer's purchase total may be computed by a point-of-sale device, such as the point-of-sale terminal 140, or by a store server or other device, such as the store server 130. The store server or other device may be operated by a human or it may be fully automated to receive, process or otherwise facilitate telephone-based orders. If the customer is purchasing goods via logging into or accessing a store's Web

page or Web site from a remote location, such as from the client device 146 via the computer network 122, the customer's purchase total may be computed by the Web site server on which the store's Web site is stored or found, such as the store server 134.

Once a purchase total is computed for a customer for goods and/or services  
5 being purchased, ordered, or otherwise paid for by the customer during the merchandise transaction, the customer will tender an amount of money to cover the purchase. The customer's tender amount or offer may be made in cash, by check, or by a debit card, credit card, smart card, electronic currency or e-cash, etc. The customer's tender amount or offer will be received during the step 102. In an in-store situation, the  
10 customer will typically offer cash to a person at a point-of-sale device or cash register, such as the point-of-sale terminal 135. In a telephone call or online ordering or purchasing situation, the customer will typically pay using a credit card, debit card, or similar method. For purposes of further discussion and elaboration of the method 100, an in-store situation will be discussed and described in further detail. The telephone  
15 call or online ordering or purchasing situations will be discussed in further detail below.

Once a customer's tender amount is received during the step 102, a calculation is made during the step 104 to determine the amount of change due to the customer based on the customer's purchase total and the tender amount provided by the customer. For example, suppose a customer purchases books in a bookstore having a  
20 total price of \$15.42. The customer provides a twenty-dollar bill to cover the purchases, which is received during the step 102, typically by a person at a cash register or other point-of-sale device. The amount due to the customer as determined or computed during the step 104 is then \$4.58, or \$20.00 minus \$15.42. If the customer pays by check, debit card, or credit card, the step 104 may not be needed if the  
25 customer is paying the exact amount due. Alternatively, the step 104 can be considered to be done with a value amount of zero due to the customer if the customer pays the exact amount due.

Once the amount due the customer is determined or computed during the step 104, an offer is made, either orally, visually, audibly, etc., to the customer during the step 106 which would allow the customer to purchase one or more lottery tickets. The offer may be communicated to the customer in many ways during the step 106. For example, the offer can be communicated audibly to the customer by a cashier or by a point-of-sale terminal, or visually by a point-of-sale terminal. A point-of-sale terminal might also print out or dispense a written version of the offer, either automatically or at the direction of a cashier, for presentation or display to the customer, either automatically or by the cashier. The point-of-sale terminal may even prompt the cashier to provide the offer to the customer.

While the price of a lottery ticket offered to the customer during the step 106 can be for any amount, preferably the lottery ticket offered to a customer is priced such that the customer will either receive no change back if the customer purchases the lottery ticket or, alternatively, no coins or loose change back if the customer purchases the lottery ticket. Using the previous example, wherein the amount due to the customer is computed during the step 104 to be \$4.58, a lottery ticket is offered to the customer during the step 106 that preferably is priced at \$4.58, such that the customer will not receive any change back if the customer elects to purchase the lottery ticket, or fifty-eight cents, such that customer will not receive any coins or loose change back if the customer elects or decides to purchase the lottery ticket. Note that, in the second case, upon the customer's acceptance of the offer made during the step 106, the customer will still be entitled to receive four dollars in bills or change. If no lottery tickets having a price of fifty-eight cents or \$4.58 are available for sale to the customer because, for example, all such priced lottery tickets have been sold or no tickets are offered for sale at those prices, the lottery tickets having prices rounded up or down from the fifty-eight cents and/or \$4.58 price levels may be offered to the customer. If

desired, such rounding process may be implemented such that the customer receives a minimum number of loose coins as change during the transaction.

By pricing tickets offered to customers during the step 106 such that the customer will either receive no change back if the customer purchases the lottery ticket or no coins or loose change back if the customer purchases the lottery ticket, the store offering the lottery ticket to the customer capitalizes on the customer's potential hesitancy or dislike of receiving small bills or coins as change, which can be bulky and heavy for the customer to carry. In addition, the customer may be more willing to avoid carrying the small bills and/or loose coins or change by purchasing a lottery ticket that has a relatively low price such that an additional benefit is gained, *i.e.*, the chance of winning a monetary or non-monetary prize. Note that the customer may be offered more than one lottery ticket during the step 106, each lottery ticket potentially having a different price, a different chance of winning, a different prize or win value, etc. In addition, one or more lottery tickets can still be offered for sale to the customer even if no amount is due to the customer, such as when the customer tenders or pays the exact amount due to the store in the step 102 by way of a check, a credit or debit card payment, a smart card, or exact cash payment.

An offer made to a customer during the step 106 for a lottery ticket may also allow the customer an opportunity to select several parameters associated with the lottery ticket. For example, the customer may wish to have a higher chance of the lottery ticket being a winning lottery ticket. In which case, the prize value associated with such as winning lottery ticket may be reduced. As another example, the customer may wish to increase the value of a winning lottery ticket. In such a situation, the lottery ticket may have a lower chance of being a winning lottery ticket. Other customer determined or selected parameters or options may also be possible when making an offer to a customer during the step 106.



After one or more lottery tickets are offered to the customer during the step 106, a determination of whether or not the customer accepts or has accepted the offer is made or completed during the step 108. An indication of the customer's acceptance may be made by a visual nod, an audible acceptance, a written acceptance, etc. from the customer. Alternatively, the customer may indicate acceptance of the offer by providing an electronic signal from a client device, such as a computer or personal digital assistant (PDA), or by generating an electronic signal from a lottery server, store server, or point-of-sale terminal. Since different lottery tickets having different prices may be offered to a customer during the step 106, the customer may also need to indicate which, if any, of the lottery tickets the customer wishes to purchase. In addition, if the offer allows the customer an opportunity to set certain parameters or options for the lottery ticket, the customer may also need to indicate the chosen parameters or options.

If the customer does not accept an offer for a lottery ticket made during the step 106, no lottery ticket is provided to the customer and the customer will usually be provided the change amount due the customer as computed during the step 104, as well as a written or printed record or receipt for the merchandise transaction. If the customer does accept an offer to purchase at least one lottery ticket made during the step 106, a corresponding lottery ticket is provided to the customer during the step 110. In addition, a transaction receipt might also be provided to the customer. If more than one lottery ticket is offered for sale to the customer during the step 106, only the lottery ticket(s) actually purchased by the customer should be provided to the customer during the step 110. The lottery ticket(s) provided to the customer during the step 110 can take many forms. For example, the lottery tickets may be in printed or electronic form or format, and the lottery tickets may be provided by a cashier to a customer or dispensed by a point-of-sale terminal to the customer.

If a point-of-sale terminal at which the customer is completing the merchandise transaction includes a printer, which could be the output device 242 of the point-of-sale terminal 135 illustrated in Figure 8, the printer can provide or print out a lottery ticket for the customer. Many different kinds of lottery tickets can be used. For example, the printing process may create a scratch-off card. Alternatively, the printing process may  
5     comprise applying an adhesive water soluble ink to a non-porous or porous substrate, then applying one or more coatings of lead or copper-based latex on top of the ink. Generally, only a minimum number of latex coatings would be required due to the fact that the lottery ticket is generated or produced in real-time, at the point-of-sale device.

10    As another example, the printing process may punch holes in specific patterns on a card to identify and distinguish a lottery ticket and associated information. Alternatively, multiple lottery tickets of every possible denomination or price which could be purchased by a customer may be preprinted by a store or a lottery organization and kept by the store for sale to customers. Upon receipt or determination of a customer's  
15    acceptance to purchase a lottery ticket during the step 108, a preprinted lottery ticket having the correct denomination can be provided to the customer during the step 110.

In an online ordering situation or telephone call ordering situation, the same basic sequence of steps 102, 104, 106, 108, 110 can be used to offer a customer the opportunity to purchase one or more lottery tickets. Obviously, during the step 110, a  
20    lottery ticket purchased by the customer will need to be shipped or otherwise delivered to the customer. Alternatively, a purely electronic version of a lottery ticket may be provided during the step 110 to avoid the need for sending or delivering a physical or tangible lottery ticket to the customer. The electronic version of a lottery ticket may still provide the customer with an immediate ability to determine whether or not the  
25    customer has won a monetary or non-monetary prize.

In such an online ordering or telephone call ordering situation, the bonus to the customer of avoiding the return of small bills or coins is not necessarily as strong as an

in-store situation where a customer may receive loose change, particularly since the customer may not be paying in cash. Therefore, in such situations, the steps 102, 104 may be eliminated if desired. Once a customer's purchase total is computed, a lottery ticket can be offered to a customer during the step 106 for any amount, including an amount that rounds up the total price to the customer or an even amount for the particular unit of currency being used. For example, if a customer purchases books online via a bookstore's Web site and the books have a total price of \$15.42, the lottery ticket offered to the customer during the step 106 may have a price of fifty-eight cents to bring the total value or price of the customer's purchases to sixteen dollars.

Alternatively, the lottery ticket offered to the customer during the step 106 may have a price of \$4.58 to bring the total value or price of the customer's purchases to twenty dollars. Since the steps 102 and 104 may be avoided or eliminated in this situation, the price of the lottery ticket is not necessarily based on an amount of change due to the customer. Rather, the price of the lottery ticket may be determined so as to create a total price for the customer that is convenient and easy for the customer to remember or write or enter into his or her checkbook, financial software, etc.

In one potential implementation of the method 100, a random number generator in a store server, such as the store server 128, or in a point-of-sale terminal, such as the point-of-sale terminal 135, may be used to generate lottery tickets dynamically or on an ad hoc basis for distribution or delivery to a customer during the step 110 after the customer has accepted the offer made during the step 106. For example, a point-of-sale terminal or store server may store or use a formula or other algorithm to generate a lottery ticket for a customer prior to or during the step 110 and to determine any win or prize value associated with the lottery ticket. One advantage provided by such an implementation is that the point-of-sale terminal or store server can easily conduct and control the lottery tickets offered for sale without sophisticated processing or communication to other devices.

One possible algorithm might use a random number generator to provide a number between a lower bound and an upper bound, zero and one hundred for example. The randomly generated number preferably determines the status or outcome of a lottery ticket provided to a customer during the step 110, *i.e.*, whether or not the lottery ticket is a winning lottery ticket and what the prize value is, if any, associated with the lottery ticket. If the random number generated is within a certain range, for example, between zero and twenty, the lottery ticket is a winning lottery ticket. If the random number is outside the range, *i.e.*, greater than twenty but less than or equal to one hundred, the lottery ticket is not a winning lottery ticket. A fixed prize value might be associated with each winning lottery ticket. Alternatively, a prize value might be associated with each lottery ticket that is linearly or non-linearly related to the price of the lottery ticket. For example, a lottery ticket having a price of forty cents may have a prize value of forty dollars while a lottery ticket having a price of ninety-three cents may have a prize value of ninety-three dollars. The lottery ticket provided to a customer during the step 110 will preferably indicate to the customer whether or not the lottery ticket is a winning lottery ticket and any prize or win value associated with the lottery ticket.

A more complicated algorithm might use a random number generator and several parameters, such a lower bound number, an upper bound number, two numbers forming a first subset range of numbers in the range of numbers between the lower bound and the upper bound, a first prize or win value associated with a first price level for a lottery ticket, two numbers forming a second subset range of numbers in the range of numbers between the lower bound and the upper bound, a second prize or win value associated with a second price level for a lottery ticket, etc. For example, such a set of parameters might be 0 (lower bound of entire range), 200 (upper bound of entire range), 0 (lower bound of first subset range), 10 (upper bound of first subset range), 5 (prize value for winning lottery tickets in first subset range), 1 (lottery ticket price that enables

the full prize value for winning lottery tickets in the first subset range), 11 (lower bound of first subset range), 15 (upper bound of first subset range), 10 (prize value for winning lottery tickets in second subset range), 1 (lottery ticket price that enables the full prize value for winning lottery tickets in the first subset range). During use of the parameters, the random number generator generates a number between the lower bound and the upper bound, *i.e.*, between zero and two hundred. If the random number generated is between fifteen and two hundred, the lottery ticket is not a winning lottery ticket. If the random number generated is between zero and ten, the lottery ticket has a prize value associated with it of five dollars if the price of the lottery ticket is one dollar, or some proportional amount of five dollars if the lottery ticket had a different price. Thus, if the winning lottery ticket had a price of sixty cents, or three-fifths of one dollar, the prize value associated with the winning ticket is three dollars, or three-fifths of five dollars. On the other hand, if the winning lottery ticket had a price of one dollar and sixty cents, or eight-fifths of one dollar, the prize value associated with the winning ticket is eight dollars, or eight-fifths of five dollars. If the random number generated is between eleven and fifteen, the lottery ticket has a prize value associated with it of ten dollars if the price of the lottery ticket is one dollar, or some proportional amount of ten dollars if the lottery ticket had a different price. If the winning lottery ticket had a price of sixty-nine cents, or sixty-nine percent of one dollar, the prize value associated with the winning ticket is six dollars and ninety cents, or sixty-nine percent of ten dollars. Alternatively, if the winning lottery ticket had a price of one dollar and seventy-four cents, or one hundred and seventy-four percent of one dollar, the prize value associated with the winning ticket is seventeen dollars and forty cents, or one hundred and seventy-four percent of ten dollars. Of course, non-monetary prizes can also be associated with lottery tickets.

By changing one or more of the parameters, the probability or odds of a lottery ticket being a winning lottery ticket can be changed. For example, making the upper

bound three hundred in the previous example will reduce the chances of winning while making the upper bound fifty will increase the chances of winning. The individual ranges between the upper and lower bounds can also be contracted or expanded as desired. In addition, the win values associated with winning lottery tickets can also  
5 changed as desired. By controlling or adjusting the parameters as desired or as necessary, a store can generally guarantee that it will achieve a desired profit level on lottery ticket transactions, especially if the parameters are used to sell a large sample set of lottery tickets.

Another way to view a parameter based system such as the type described  
10 immediately above, is like a gambling machine or slot machine "pull" or play wherein a paid play generates a random or pseudo-random outcome used to determine a potential payout to a customer. In this scenario, the customer is paying for a chance to win a prize based on an offer to buy one or more lottery tickets made during the step 106. As used herein, "slot machine" means and includes all types of gaming machines,  
15 including slot machines, video poker machines, keno and bingo devices, video blackjack devices, video roulette devices, and the like. In such an implementation, each lottery ticket can be viewed or thought of as a single pull or play on a slot machine or other gaming device or machine by a customer, the results of which may entitle the customer to win one or more monetary or non monetary prizes. Moreover, the offer to  
20 the customer made during the step 106 may include the ability for the customer to set or select certain parameters or options associated with the pull or play. Customization of parameters or options that may be available or possible for a customer when a lottery ticket or slot machine "pull" or play is offered to a client during the step 106 is described in pending U.S. Application Serial No. 09/052,291, entitled "A Gaming  
25 Device and Method and Operation Thereof" and filed March 31, 1998, the complete disclosure of which is herein incorporated by reference.

In a different implementation of the method 100, a ticket database, such as the ticket database 162, may be established or maintained by or on a lottery server, such as the lottery server 126. As previously discussed above, the ticket database might be used to store any information related to lottery tickets available for sale to customers, such as lottery ticket availability, lottery ticket identification numbers, lottery ticket prices, the monetary or non-monetary prizes or premiums associated with each winning lottery ticket, etc. All or a portion of the ticket database may be provided to one or more store servers, such as the store servers 128, 130, 132, each of which may be located in a different store. The ticket database information provided to the store servers may form all or part of offer databases on the store servers, each offer database being directed to lottery tickets sold in a particular store. As previously discussed above, each of the offer databases preferably generate and store information relating to lottery tickets sold or offered for sale and may include a list of lottery ticket inventory, identifiers for each possible lottery ticket, lottery ticket availability or price, an indication of whether or not each lottery ticket is a winning lottery ticket, a description of monetary or non-monetary prize associated with each winning lottery ticket, and status information for each lottery ticket.

Before a lottery ticket is offered for sale to a customer in a store, the offer database associated with a store server for the store is preferably queried to determine which lottery tickets are available for sale or if a specific lottery ticket is available for sale. Alternatively, the ticket database on the lottery server may be queried to determine lottery ticket availability. When a lottery ticket is sold, the offer database in which information regarding the lottery ticket is kept is preferably updated to reflect the lottery ticket having been sold to a customer. The ticket database may also be updated to reflect or indicate such a sale.

The following discussion and Figures 9, 10, and 11 provide more detail as to how an implementation of the method 100 may be completed using lottery servers,

store servers, point-of-sale terminals, ticket databases, offer databases, and inventory databases.

Now referring to Figure 9, an example of a more detailed implementation of the method 100 will now be discussed. The embodiment 250 of the method 100 illustrated in Figure 9 includes the steps 102, 104, 106, 108, 110 previously described above. In addition, the method 250 includes a step 252 during which a ticket database, such as the ticket database 162 illustrated in Figure 4, is created or generated by a store, a lottery organization, or other entity, a step 254 during which some or all of the ticket database information created during the step 252 is distributed, if necessary, to one or more store servers, lottery servers, etc., a step 256 during which a transaction or purchase total is created for a customer purchasing, ordering, or otherwise paying for goods or services, a step 258 during which the offer database created during the step 252 is updated after the purchase of a lottery ticket by a customer, and a step 260 during which some or all of the information from the updated ticket database is distributed, if necessary, to one or more store servers, lottery servers, etc. Each of the steps 252, 254, 256, 258, 260 of the method 250, and their operation and use with the previously described steps 102, 104, 106, 108, 110, will be described in further detail below.

The method 250 allows for a database of lottery tickets to be generated prior to any of the lottery tickets being offered for sale to customers. During the step 252, such a ticket database can preferably be created or otherwise generated that contains a description of each of the lottery tickets that will be available for sale. For example, the ticket database 162 illustrated in Figure 4 includes an identification of each lottery ticket to be offered for sale and whether each lottery ticket is associated with a winning outcome or a losing outcome, *i.e.*, whether each lottery ticket is a winning lottery ticket or a losing lottery ticket. In addition, the ticket database 162 includes the price or deductible amount associated with each ticket, *i.e.*, the price to be paid by a customer for each lottery ticket, as well as premium or prize associated with each lottery ticket,



*i.e.*, what the customer wins if the lottery ticket is a winning lottery ticket, which can be a monetary prize or a non-monetary prize, or both. Furthermore, the ticket database 162 includes a status for each lottery ticket indicating whether or not the lottery ticket is sold or unsold. When the ticket database 162 is first created, presumably each of the  
5 lottery tickets will have an "unsold" ticket status. Other or different information may also be created for the ticket database during the step 252 and the method 250 should not be interpreted to be limited to a ticket database having any specific structure or containing any specific types or amounts of information.

One of the advantages of the ticket database created during the step 252 is that  
10 the number and types of each available lottery ticket can be predetermined or preallocated. For example, a store or lottery organization creating an offer database may want to only have lottery tickets available for prices less than one unit of currency, such as a U.S. dollar, a German mark, a British pound, etc. More specifically, the store or lottery organization may want to only offer lottery tickets for sale that have a price  
15 between one cent and ninety-nine cents inclusively. As another example, the store or lottery organization may want to offer lottery tickets for sale that have a price between fifty-one cents and ninety-nine cents inclusively.

In addition to setting prices of available lottery tickets, a store or lottery organization creating a ticket database during the step 252 may want to have only  
20 certain numbers of lottery tickets available at each available lottery ticket price level. For example, the store or lottery organization may want to have a total of ninety-nine hundred lottery tickets available or authorized for sale to customers, one hundred lottery tickets each at each one cent increment between one cent and ninety-nine cents inclusively. Thus, one hundred lottery tickets having a price of one cent are available,  
25 one hundred lottery tickets having a price of two cents are available, etc. Alternatively, the store or lottery organization may want to have ten thousand lottery tickets available or authorized for sale to customers, five hundred lottery tickets each at the twenty five

cent (\$0.05) increments between five cents and one dollar inclusively, *i.e.*, five hundred lottery tickets each having a price of five cents, five hundred lottery tickets each having a price of ten cents, five hundred lottery tickets each having a price of fifteen cents, etc.

A store or lottery organization can also set the number of winning lottery tickets and the prize or win value associated with each winning ticket when creating a ticket database during the step 252. For example, for the immediately preceding example wherein ten thousand lottery tickets are available for sale, five hundred lottery tickets each at five cent (\$0.05) increments between five cents and one dollar inclusively, perhaps only ten, twenty, fifty, or some other predetermined number of the five hundred lottery tickets having a price of fifty cents each will be winning tickets. The same might be true for lottery tickets available at each of the other price levels. Alternatively, perhaps one hundred of the five hundred lottery tickets having a price of twenty cents each will be winning lottery tickets while only fifty of the five hundred lottery tickets having a price of fifty cents each will be winning lottery tickets. Of the fifty winning lottery tickets having a price of fifty cents each, perhaps forty will have a prize or win value of one dollar, five will have a prize or win value of ten dollars, and five will have a prize or win value of twenty dollars. In addition, a base win value or amount might be established for winning tickets for one of the price levels of the available or authorized lottery tickets. Each winning lottery ticket at the other lottery ticket price levels may then be proportionally related or prorated. For example, a winning lottery ticket having a price of seventy-six cents may have a win value or premium of fifty dollars. A winning lottery ticket having a price of thirty-eight cents, or one-half of seventy-six cents, may have a win value or premium of twenty-five dollars, or one-half of fifty dollars. Therefore, the win or prize value of a winning lottery ticket is substantially proportional to the price of the lottery ticket or the risk undertaken by the customer in purchasing the lottery ticket. As another example, suppose a ticket database created during the step 252 includes at least fifteen winning

lottery tickets, ten of which winning lottery tickets each have a price of eighty cents and a win or prize value of ten dollars, and five of which winning lottery tickets each have a price of eighty cents and a win or prize value of twenty dollars. The ticket database may also include fifteen additional winning lottery tickets, ten of which winning lottery tickets each have a price of forty cents and a win or prize value of five dollars, and five of which winning lottery tickets each have a price of forty cents and a win or prize value of ten dollars. As previously discussed, non-monetary prizes can also be associated with some or all of the winning lottery tickets available or authorized at each price or cost level. As an example, some or all of the five previously discussed lottery tickets having a win value of ten dollars could instead have prizes such as free cans of chicken noodle soup, produce, frozen food packages, clothing, car washes, etc. associated with them. The ticket database might then also include a monetary figure or win value associated with each non-monetary prize, which could be the retail price of the non-monetary prize, the wholesale price of the non-monetary prize, or some other desired formula-based or non formula-based number.

By setting the number of lottery tickets available at each price level, the number of lottery tickets at each price or cost level that will be winning tickets, and the prize or win value of each winning lottery ticket, a store or lottery organization creating the ticket database during the step 252 or implementing the method 250 can control the expected level of cost and profit created by or resulting from selling all of the lottery tickets in the ticket database. By adjusting any or all of these variables, the expected cost or profit to the store or lottery organization can change. In addition, the overall or total winnings or prizes to customers can also be controlled or changed. When creating a ticket database during the step 252, a store or lottery organization might set a minimum lottery ticket price, a maximum lottery ticket price or both. In addition, the store or lottery organization might establish an average price to customers of a group of lottery tickets sold as well as a minimum price or maximum price for each lottery ticket

in the group of lottery tickets, or both, such that the average price to customers is obtained or exceeded when all of the lottery tickets in the group of lottery tickets have been sold, thereby helping to establish a minimum or desired profit level for the store or lottery organization.

5           A ticket database created during the step 252 may be created at an individual store level or at a multi-store or multi-outlet level. That is, a single store, lottery organization, or other entity may create a ticket database during the step 252 for use in conducting lottery ticket sales only at the store. Alternatively, a lottery organization, store, or other entity may create a ticket database during the step 252 which may be  
10       used by many stores or lottery ticket outlets selling lottery tickets. A ticket database created or used by a store server might comprise, include, or be a subset of an offer database, such as the offer database 192 previously described above.

          Now referring back to Figure 9, during the step 254, some or all of the information in the ticket database created during the step 252 may be optionally  
15       transmitted to one or more stores or other locations or servers. The information from the ticket database transmitted to a store server might form part or all of an offer database on or accessible by the store server. For example, if a store is conducting a lottery in its own store, and no other stores or lottery ticket sale locations are involved, the store itself may generate the ticket database during the step 252. Therefore, the  
20       ticket database is probably already located at the store and the step 254 is not needed. In this scenario, the ticket database can also be thought of as an offer database. However, the store may need to distribute some or all of the ticket database information to one or more store servers, point-of-sale terminals, or other devices in or at the store or otherwise used in connection with store operations. In such a situation, the  
25       information from the ticket database stored on a store server might be all or part of an offer database for the store server.

If a lottery organization or other entity is conducting a lottery in conjunction with multiple stores or lottery ticket sales outlets, the lottery organization or other entity may generate the ticket database during the step 252 and store it on a lottery server.

Some or all of the ticket database may then need to be transmitted or otherwise

5 distributed to individual stores, lottery ticket sale outlets, store servers, etc. during the step 254. For example, suppose that five stores or other lottery ticket sale outlets are participating in a particular lottery. For the example discussed above wherein ten thousand lottery tickets are available for sale, five hundred lottery tickets each at each five cent increment between five cents and one dollar inclusively, each of the five stores  
10 may be authorized to sell one hundred different lottery tickets at each of the five cent increments between five cents and one dollar. Therefore, in this scenario, during the step 254, information regarding the two thousand lottery tickets available for sale by a first store is distributed to the first store while information regarding the two thousand different lottery tickets available for sale by a second store is distributed to the second  
15 store, information regarding the two thousand different lottery tickets available for sale by a third store is distributed to the third store, and so on for the fourth and fifth stores. The information provided to the first store may comprise or be included in an offer database maintained by the first store. Similarly, the information provided to the second store may comprise or be included in an offer database maintained by the  
20 second store. Each store is, as a result, selling lottery tickets that are not available from or at the other four stores and each store is, in effect, implementing its own independent lottery separate from the other four stores, albeit the overall lottery ticket availability is generated or determined by the lottery ticket organization which generated the original ticket database during the step 252.

25 As an alternative to the example discussed immediately above, each lottery ticket in the ticket database may be available for sale by each of the five stores and the ticket database may be provided to all five stores or maintained centrally in a lottery

server. Obviously, once a specific lottery ticket is sold by one store, it should no longer be available for sale by or at another store. Therefore, the ticket database or inventory of available tickets preferably is updated frequently or upon the sale of each lottery ticket so as to prevent, or reduce the chance of, a unique lottery ticket being sold more  
5 than once. In this scenario, during the step 254, information from the ticket database created during the step 252 for each of the available ten thousand lottery tickets is preferably distributed to each of the five stores or at least made centrally available for access by each of the five stores, and may comprise or be included in offer databases maintained at each of the five stores.

10 During the step 256, a transaction or purchase total is generated for a customer as a result of the customer's desire to purchase identified goods and/or services during a merchandise transaction, as previously discussed above. The merchandise transaction or purchase total is preferably communicated to the customer who then provides a tender amount to cover or pay for the purchases during step 102. For the example  
15 discussed above where a customer purchases books in a bookstore having a total price of \$15.42, the customer may provide a twenty-dollar bill to cover the purchases, which is received during the step 102, typically by a person at a cash register or other point-of-sale device. The amount due to the customer as determined during the step 104 is then \$4.58, or \$20.00 minus \$15.42.

20 For the method 250, the steps 102, 104, 106, 108, 110 preferably operate as previously described above. During the step 106, however, some additional actions may be undertaken. For example, if the customer discussed above is to be offered an opportunity to purchase a lottery ticket for fifty-eight cents, a point-of-sale device, such as the point-of-sale terminal 135, or a store server, such as the store server 128, may  
25 determine if a lottery ticket having a price of fifty-eight cents is available for sale. Thus, during the step 106, the ticket database created during the step 252 may be accessed or otherwise interrogated to determine if such a lottery ticket is available. If

the ticket database is being maintained on a lottery server, such as the lottery server 126, a communication may occur between the point-of-sale terminal 135 and the store server 128 or the lottery server 126, or between the store server 128 and the lottery server 126, to make such a determination by querying or accessing the ticket database.

- 5 If all or a portion of the ticket database is being maintained on the store server 128, thereby making the ticket database the same or part of the offer database stored on or accessible by the store server 128, a communication may occur between the point-of-sale terminal 135 and the store server 128 to make or enable such a determination by querying or accessing the offer database. If a lottery ticket at the desired price to be
- 10 offered a customer is available, the method 250 offers the lottery ticket for sale to the customer during the step 106 as previously described above and continues to the step 108 and 110 as previously described above. If a lottery ticket at the desired price to be offered a customer is not available, the step 106 and the remainder of the steps in the method 250 may be aborted or eliminated. Alternatively, availability of a lottery ticket
- 15 at a different price may be determined in the same manner as described immediately above. Similarly, if the customer does not accept the offer made during the step 106, the steps 110, 258, 260 and the remainder of the method 250 may be aborted or eliminated.

- After a previously unsold lottery ticket is sold to a customer or otherwise
- 20 provided to a customer during the step 110, the ticket database created during the step 252 is preferably but optionally updated or revised during the step 258. The step 258 may include updating the entire ticket database, which may be stored on a lottery server or a store server, or just the portion of the ticket database or offer database maintained by a particular store or store server. Depending on the manner in which the ticket
- 25 database is maintained or accessed, information regarding the updated offer database may need to be distributed to one or more lottery servers, store servers, etc. during the

optional step 260. A receipt might also be provided to the customer to represent or memorialize the transaction.

While the method 250 is specifically designed to work at a lottery server level, *i.e.*, with a ticket database created, maintained, and possibly distributed, all or in part, by a lottery server to one or more store servers, it should be recognized that the method 250 can be implemented at a store server level, wherein the ticket database created during the step 252 is stored and maintained on a store server, and later distributed or updated to other store servers if necessary. In this scenario, the ticket database created during the step 252 is the equivalent of, or the same as, an offer database such that no separate ticket database exists on a lottery server.

Now referring to Figure 10, one possible implementation or method of operation 300 of a store server, such as the store server 128 illustrated in Figure 5, will now be discussed in further detail. The method 300 may be implemented by or as part of the program 186 or as part of other software operating on the store server 128 illustrated in Figure 5. The method 300 illustrated in Figure 10 assumes that a customer is completing a merchandise transaction at a point-of-sale device, such as the point-of sale terminal 135, in a store and that a ticket database and/or an offer database have previously been created, as discussed above. The offer database may be stored on the store server 128, on a lottery server, or on some other device accessible by the store server 128.

In brief, the method 300 includes a step 302 wherein the store server 128 receives information from the point-of-sale terminal 135 regarding a merchandise transaction being conducted by a customer at the point-of-sale terminal 135, a step 304 during which the store server 128 updates a transaction database to record or store information related to the specific merchandise transaction, a step 306 during which the store server 128 determines lottery ticket availability is determined by accessing an offer database stored on the store server 128, a lottery server, or some other device, a



step 308 during which information regarding the availability of one or more lottery tickets that are available and that can be offered to the customer is provided to the point-of-sale terminal, a step 310 during which the store server 128 receives information from the point-of-sale terminal 135 regarding whether the customer has  
5 accepted an offer to buy one or more lottery tickets, a step 312 during which, if the customer has not purchased a lottery ticket, the store server 128 finalizes or updates the transaction database as needed to indicate that no lottery ticket has been sold to the customer, a step 314 during which the store server 128 receives information from the point-of-sale terminal 135 regarding the customer's acceptance of an offer to buy one or  
10 more lottery tickets, a step 316 during which, since the customer has accepted an offer to purchase a lottery ticket, the store server 128 provides information and/or instructions to the point-of-sale terminal 135 regarding the lottery ticket to be provided to the customer, and a step 318, during which, since the customer has accepted an offer to purchase a lottery ticket, the store server 128 updates the offer database or otherwise  
15 provides information to a lottery server or other device on which the offer database is stored to indicate that the lottery ticket now has a "sold" status. The method 300 and each of the steps 302, 304, 306, 308, 310, 312, 314, 316, 318 will now be discussed in further detail.

During the step 302 the store server 128 receives information from the point-of-  
20 sale terminal 135 regarding a partial or complete total of goods or services being purchased or otherwise paid for by the customer as part of a merchandise transaction. The information received by the store server 128 from the point-of-sale terminal 135 during the step 302 may also include a tender amount provided by the customer as part of the merchandise transaction. Therefore, with regard to the method 100 and the  
25 method 250, the step 302 might occur after the step 102 wherein the customer has provided the tender amount. The step 104 in the methods 100, 250 might also be performed by the store server 128 in this scenario.

After the store server 128 has received information from the point-of-sale terminal 135, the store server might optionally update a transaction database, such as the transaction database 190 illustrated in Figure 7, during the step 304. The store server 128 might create a record of the merchandise transaction as part of the step 304.

- 5 The transaction record might include a transaction identifier unique to the transaction, an identifier of the point-of-sale device involved in the merchandise transaction, the time and date of the merchandise transaction, a listing of the goods and/or services being purchased by the customer during the merchandise transaction, the pretax subtotal for the goods and/or services being purchased by the customer during the
- 10 merchandise transaction, and the after tax subtotal for the goods and/or services being purchased by the customer during the merchandise transaction.

- During the step 306, the store server 128 determines the availability or status of one or more lottery tickets that can be offered for sale to the customer as part of the customer's merchandise transaction. Assuming that an offer database has previously
- 15 been created, perhaps during an implementation of the step 252 previously discussed above, the store server 128 preferably queries the offer database or causes the offer database to be queried during the step 306 to determine lottery ticket availability. The offer database may be stored or maintained on the store server 128, on a different store server, on a lottery server, or on some database server or other device. The store server
- 20 128 might also access or query a ticket database stored or maintained by a lottery server.

- During the step 308, information regarding one or more lottery tickets that can be offered for sale to a customer during the customer's merchandise transaction is provided by the store server 128 to the point-of-sale terminal 135. Note that either the
- 25 store server 128 or the point-of-sale terminal 135 may actually decide which of the available lottery tickets are to be offered for sale to the customer. In addition, the store

server 128 might provide information to the point-of-sale terminal 135 relating to all or only some of the lottery tickets available for sale to customers during the step 308.

After the point-of-sale terminal 135 receives information from the store server 128 regarding lottery ticket availability, the point-of-sale terminal may offer one or  
5 more of such available lottery tickets for sale to customers as part of the step 106 previously described above. During the step 310, the store server 128 preferably receives information from the point-of-sale terminal 135 as to whether a customer has agreed to or indicated a desire to purchase a lottery ticket. If the point-of-sale terminal 135 did not offer a lottery ticket to the customer, or if the customer did not accept an  
10 offer to purchase a lottery ticket, the answer or communication from the point-of-sale terminal 135 to the store server 128 during the step 310 is depicted as negative, "no," or "maybe" and the method 300 proceeds to the step 312. During the step 312, the store server 128 optionally updates the transaction database to indicate the close or completion of the merchandise transaction and that the customer did not purchase a  
15 lottery ticket. In addition, the store server 128 may optionally update an inventory database or cause the inventory database to be updated during the step 312 to record changes in the store's inventory as a result of, or in accordance with, the customer's transaction. The inventory database may include information regarding unsold or otherwise available lottery tickets.

20 If the point-of-sale terminal 135 did offer a lottery ticket to the customer and the customer did accept the offer to purchase a lottery ticket, the answer or communication from the point-of-sale terminal 135 to the store server 128 during the step 310 is depicted as affirmative or "yes" and the method 300 proceeds to the step 314 during which information regarding the lottery ticket(s) purchased by the customer  
25 is provided to the store server 128. That is, if the point-of-sale terminal 135 offered more than one lottery ticket for sale to the customer or if the point-of-sale terminal 135 had the ability to determine which lottery ticket(s) had been offered to the customer

without informing or communicating this information to the store server 128, the point-of-sale terminal 135 might also provide information regarding the specific lottery ticket(s) the customer agreed to purchase as part of the communication to the store server 128 during the step 314.

5           During the step 316, if necessary, the store server optionally provides instructions or information to the point-of-sale terminal 128 regarding the specific lottery ticket(s) to be provided by the point-of-sale terminal 128 to the customer. The information might include numbers or other indicia or identifying marks to print on the lottery ticket(s), instructions on how to print the lottery ticket(s), which lottery ticket(s)  
10   to provide to the customer, etc.

          During the step 318, the store server 128 may optionally update the offer database or otherwise cause the offer database to be updated to indicate that the lottery ticket(s) purchased by or provided to the customer are now unavailable or have a "sold" status. If the offer database or a ticket database is kept on a lottery server or some  
15   device other than the store server 128, the store server 128 may send the necessary information to the appropriate device to allow or cause the offer database or the ticket database to be updated. After the step 318 is complete, the store server 128 may update the transaction database or cause the transaction database to be updated during the step 312 to record the final total or price to the customer, the lottery ticket identifier(s)  
20   associated with the lottery ticket(s) purchased by the customer, etc. In addition, after the step 318 is complete, the store server 128 may update an inventory database or cause the inventory database to be updated during the step 312 to record changes in the store's inventory as a result of or in accordance with the customer's transaction.

          Now referring to Figures 11A and 11B, one possible implementation or method  
25   of operation 350 of a point-of-sale terminal or device, such as the point-of sale terminal 135 illustrated in Figure 8, will now be discussed in further detail. The method 350 may be implemented by or as part of the program 248 or other software operating or

resident on the point-of-sale terminal 135 illustrated in Figure 8. The method 350 illustrated in Figures 11A and 11B assumes that a customer is completing a merchandise transaction at the point-of-sale device 135 in a store and that an offer database and/or a ticket database has previously been created, as discussed above. The offer database may be stored on a store server, on a lottery server, or on some other device.

The method 350 includes the steps 102, 104, 106, 108, 110 previously described above. In addition, the method 350 includes a step 352 during which the point-of-sale terminal 135 calculates a total for a merchandise transaction being conducted by a consumer, *i.e.*, the total (which may or may not include taxes, delivery charges, etc.) of the goods and/or services being purchased or paid for by the customer as part of the merchandise transaction, a step 354 during which the total amount calculated during the step 352 is provided or otherwise indicated to the customer, a step 356 during which information regarding the customer's merchandise transaction is provided to a store server, such as the store server 128, a step 358 during which information regarding one or more lottery tickets that may be sold to the customer is received by the point-of-sale terminal 135, a step 360 during which final information regarding the customer's merchandise transaction is provided to the store server, both if the customer purchases at least one lottery ticket and if the customer does not purchase a lottery ticket, a step 362 during which a final transaction record or receipt is provided to the customer providing information relating to the customer's completed merchandise transaction, a step 364 during which the point-of-sale terminal 135 provides information to the store server 128 regarding the customer's acceptance of an offer to purchase one or more lottery tickets, and a step 366 during which the point-of-sale terminal 135 receives information from the store server 128 regarding the lottery ticket(s) to be provided to the customer. The method 350 and each of the steps 352, 354, 356, 358, 360, 362, 364, 366 will be discussed in further detail immediately below.

During the step 352, the point-of-sale terminal 135 calculates a total price for the products and/or services being purchased or paid for by the customer during the customer's merchandise transaction. The step 353 may occur, for example, when a customer has his or her products totaled at or by a cash register in a store. The total  
5 calculated by the point-of-sale terminal 135 during the step 352 may or may not include taxes or other charges.

After the merchandise transaction total is determined during the step 352, the point-of-sale device 135 provides or otherwise indicates the total amount to the customer or another person during the step 354. The total may be presented to the  
10 customer or other person visually, such as by display, monitor, or screen, audibly, in writing, or by some other method or apparatus.

As previously described above, during the step 102 a tender amount is received from the customer to pay for or cover the merchandise transaction total computed during the step 252 and provided or indicated to the customer during the step 354. If  
15 the customer is paying in cash, the customer may be owed an amount of change equal to the tender amount from the customer minus the merchandise transaction total. As previously described above, the point-of-sale terminal 135 or a store server may compute the amount of change due to the customer during the step 104.

During step 356, information regarding the merchandise transaction is  
20 communicated or provided to the store server 128. The step 356 from the point of view of the point-of-sale terminal 135 is complementary to the step 302 previously discussed above from the point of view of the store server 128. The information provided by the point-of-sale terminal 135 to the store server 128 may include a partial or complete description or total of the goods or services being purchased or otherwise paid for by  
25 the customer as part of the merchandise transaction. The information may also include the tender amount provided by the customer as part of the merchandise transaction and received by the point-of-sale terminal during the step 356. If the point-of-sale terminal

135 does not conduct or perform the step 104, the information provided by the point-of-sale terminal 135 to the store server 128 may include the merchandise transaction total calculated during the step 352 and the tender amount received by the point-of-sale terminal 135 during the step 102 such that the store server can complete the step 104.

5 In this scenario, the step 104 is preferably performed by the store server 128 after step 356.

During the step 358, the point-of-sale terminal 135 receives lottery ticket information from the store server 135 regarding one or more lottery tickets that can or that are to be offered to the customer during the step 106. The step 358 from the point  
10 of view of the point-of-sale terminal 135 is complementary to the step 308 previously discussed above from the point of view of the store server 128.

Once the point-of-sale terminal 135 has received the information from the store server 128, the point-of-sale terminal 135 may offer one or more lottery tickets for sale to the customer during the step 106, as previously described above. Similarly, during  
15 the step 108, the point-of-sale terminal 135 is preferably provided with sufficient information to inform the point-of-sale terminal 135 or to let the point-of-sale terminal 135 determine whether or not the customer has or has not accepted the offer made during the step 106 to purchase one or more lottery tickets, as previously described above.

20 Now referring to Figure 11B, if a determination is made during the step 108 that the customer does not want to purchase a lottery ticket, the method 350 proceeds to the step 360 during which, if necessary, final information regarding the merchandise transaction may be provided by the point-of-sale terminal 135 to the store server 128. The information provided by the point-of-sale terminal 135 to the store server 128 may  
25 be used by the store server 128 to update a transaction database or an inventory database or passed on to a lottery server or other device. After step 360 is completed,

the point-of-sale terminal 135 preferably, but optionally, provides a transaction record or receipt to the customer during the step 362.

If the determination is made during the step 108 that the customer does want to purchase at least one lottery ticket, the method 350 proceeds to the step 364 during  
5 which the point-of-sale terminal 135 provides an indication to the store server 128 of the customer's acceptance or desire to purchase one or more lottery tickets. The step 364 from the point of view of the point-of-sale terminal 135 is complementary to the step 314 previously discussed above from the point of view of the store server 128. If the point-of-sale terminal 135 offered more than one lottery ticket for sale to the  
10 customer or if the point-of-sale terminal 135 had the ability to determine which lottery ticket(s) to offer to the customer, such that the store server 128 cannot necessarily determine or know which lottery ticket(s) the customer purchased, the point-of-sale terminal 135 might also provide information regarding the specific lottery ticket(s) the customer agreed to purchase as part of the communication to the store server 128  
15 during the step 364.

During the step 366, the point-of-sale terminal 135 receives information and instructions from the store server 128 regarding, for example, which lottery ticket(s) to provide to the customer, how the lottery ticket(s) should be printed, etc. The step 366 from the point of view of the point-of-sale terminal 135 is complementary to the step  
20 316 previously discussed above from the point of view of the store server 128.

After the step 366, the method 350 proceeds to the step 110 during which a lottery ticket is provided or distributed to the customer. After the step 110 is completed, the method 350 conducts the step 360 during which, if necessary, final information regarding the merchandise transaction may be provided by the point-of-sale  
25 terminal 135 to the store server 128. The information provided by the point-of-sale terminal 135 to the store server 128 may be used by the store server 128 to update a transaction database or an inventory database or passed on to a lottery server or other



device. The store server 128 might also send information to a lottery server or other device to indicate or update an offer or ticket database that the lottery ticket(s) purchased by the customer is now sold or should now have a "sold" status. After step 360 is completed, the point-of-sale terminal 135 may provide a transaction record or receipt to the customer during the step 362 perhaps by using the output device 242 or the output device 244.

As shown by the discussion above, the methods 100, 250, 300, 350 enable the point-of-sale terminal 135 to perform or complete both a merchandise transaction and a lottery ticket transaction for a customer. Moreover, the merchandise transaction and the lottery transaction may be conducted as part of a single transaction for the customer. That is, the point-of-sale terminal 135 allows a customer to both purchase goods and/or services as well as one or more lottery tickets during a single transaction or during a single visit to or use of the point-of-sale terminal 135.

The foregoing description is considered as illustrative only of the principles of the invention. Furthermore, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and process shown and described above. Accordingly, all suitable modifications and equivalents may be resorted to falling within the scope of the invention as defined by the claims which follow. For example, many, if not all, of the steps described above can be combined or performed in one or more alternative orders or sequences without departing from the scope the present invention and the claims should not be construed as being limited to any particular order or sequence, unless specifically indicated. Furthermore, the methods disclosed herein are not limited to any specific type of computer or communications network or system topology, architecture, software, connection protocols, routing schemes, management or control procedures, or hierarchy.

Each of the methods described above can be performed on a single computer, computer system, microprocessor, etc. In addition, two or more of the steps in each of the methods described above could be performed on two or more different computers, computer systems, microprocessors, etc., some or all of which may be locally or  
5 remotely configured. The methods can be implemented in any sort or implementation of computer software, program, sets of instructions, code, ASIC, or specially designed chips, logic gates, or other hardware structured to directly effect or implement such software, programs, sets of instructions, or code. The computer software, program, sets  
10 of instructions, code can be storable, writeable, or savable on any computer usable media or other program storage device or media such as a floppy or other magnetic or optical disk, magnetic or optical tape, CD-ROM, hard disk drive, Zip™ disk, flash or optical memory card, microprocessor, solid state memory device, RAM or ROM chip(s), PROM or EPROM device, etc.

The computer network discussed herein is only meant to be generally  
15 representative of cable, computer or other communication networks for purposes of elaboration and explanation of the present invention and other devices, networks, etc. may be connected to the computer network without departing from the scope of the present invention. The computer network is also intended to be representative of, and include all or a part of, the Internet, the World Wide Web, and other privately or  
20 publicly operated networks. The computer network can also include other public and/or private wide area networks, local area networks, data communication networks or connections, intranets, routers, satellite links, microwave links, cellular or radio links, fiber optic transmission lines, ISDN lines, TI lines, etc. In addition, as used herein, the terms "computer," "terminal," "client," and "client device" are generally  
25 interchangeable and are meant to be construed broadly and to include, but not be limited to, all clients, client devices or machines, personal digital assistants, cash registers, terminals, computers, processors, servers, etc. connected or connectable to a

computer or data communications network and all devices on which Internet-enabled software, such as the NETSCAPE COMMUNICATOR™ or NAVIGATOR™ browsers, MOSIAC™ browser, or MICROSOFT INTERNET EXPLORER™ browsers, can operate or be run. The term “browser” should also be interpreted as including

- 5 Internet-enabled software and computer or client software that enables or allows communication over a computer network and Internet-enabled, monitored, or controlled devices such as WebTV™ devices, household appliances, phones, etc.

- The words “comprise,” “comprises,” “comprising,” “include,” “including,” and “includes” when used in this specification and in the following claims are intended to
- 10 specify the presence of stated features, elements, integers, components, or steps, but they do not preclude the presence or addition of one or more other features, elements, integers, components, steps, or groups thereof.

## CLAIMS

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method for selling a lottery ticket to a customer, comprising:  
5           computing a price for a lottery ticket based, at least in part, on an amount of change due to a customer;  
              providing said customer with an offer to purchase said lottery ticket at said computed price;  
              receiving from said customer an acceptance of said offer to purchase  
10           said lottery ticket at said computed price; and  
              providing said lottery ticket to said customer.
2. The method of claim 1, wherein said amount of change due to said customer includes an amount that is less than one unit of currency.
3. The method of claim 2, wherein said unit of currency is a dollar.
- 15           4. The method of claim 1, further comprising:  
              establishing a probability for said lottery ticket being a winning ticket prior to providing said customer with an offer to purchase said lottery ticket at said computed price.
- 20           5. The method of claim 1, further comprising:  
              establishing a probability for said lottery ticket being a winning ticket prior to said providing said lottery ticket to said customer.
6. The method of claim 1, further comprising:  
              establishing a probability for said lottery ticket being a winning ticket based, at least in part, on said amount of change due to said customer.

7. The method of claim 1, further comprising:  
establishing a win value for said lottery ticket.
8. The method of claim 7, wherein said win value is based, at least in part,  
on said amount of change due to said customer.
- 5 9. The method of claim 1, further comprising:  
establishing an average per lottery ticket win value for a group of lottery  
tickets to be offered for sale.
- 10 10. The method of claim 1, wherein said lottery ticket is an instant win style  
lottery ticket.
- 10 11. The method of claim 1, further comprising:  
maintaining a database having information related to a plurality of  
lottery tickets that can be offered for sale.
12. The method of claim 11, further comprising:  
updating said database when a lottery ticket is sold.
- 15 13. The method of claim 1, wherein said computed price is based, at least in  
part, on a monetary value of a number of coins due to said customer.
14. The method of claim 1, further comprising:  
associating a non-monetary prize with at least one winning lottery ticket  
that can be sold.
- 20 15. The method of claim 14, wherein said non-monetary prize has a value  
determined, at least in part, on said amount of change due to said customer

16. The method of claim 1, further comprising:  
establishing a desired average price per lottery ticket for a group of  
lottery tickets to be offered for sale; and  
establishing at least one of a minimum price and a maximum price for  
each lottery ticket in said group of lottery tickets such that an actual average  
price per lottery ticket for said group of lottery tickets is not less than said  
desired average price.
17. The method of claim 1, further comprising:  
establishing at least one of a minimum price for each lottery ticket  
offered for sale and a maximum price for each lottery ticket offered for sale.
18. The method of claim 1, further comprising:  
associating a at least one of a monetary prize or a non-monetary prize to  
said lottery ticket.
19. A method for selling a lottery ticket to a customer during a transaction,  
comprising:  
computing a total price of items being purchased by a customer;  
receiving a tender amount from said customer;  
determining an amount of change due to the customer;  
providing said customer with an offer to purchase a lottery ticket at a  
price based, at least in part, on said amount of change due to said customer;  
determining if said customer accepts said offer to purchase said lottery  
ticket; and  
providing said lottery ticket to said customer if said customer accepts  
said offer to purchase said lottery ticket.

20. The method of claim 19, further comprising:  
maintaining a database having information related to a plurality of  
lottery tickets that can be sold.
21. The method of claim 20, further comprising:  
5 updating said database each time a lottery ticket is sold.
22. The method of claim 19, wherein said price of said lottery ticket is  
based, at least in part, on a total value of coins due to said customer.
23. The method of claim 19, further comprising:  
associating a non-monetary prize with said lottery ticket.
- 10 24. An article of manufacture, comprising:  
a computer usable medium having a computer readable program means  
embodied therein for enabling a sale of a lottery ticket to a customer entitled to  
receive an amount of change, the computer readable program means in said  
article of manufacture comprising:  
15 computer readable program means for causing a computer to  
compute a price for a lottery ticket based, at least in part, on an amount  
of change due to a customer;  
computer readable program means for causing said computer to  
provide said customer with an offer to purchase said lottery ticket; and  
20 computer readable program means for causing said computer to  
provide said lottery ticket to said customer.
25. The article of manufacture of claim 24, further comprising:  
computer readable program means for associating a non-monetary prize  
with said lottery ticket.

26. In a system having means for selling an instant win style lottery ticket to a customer, a method comprising:

establishing a desired average price per lottery ticket for a group of lottery tickets to be offered for sale;

5 establishing at least one of a minimum price and maximum price for each lottery ticket in said group of lottery tickets such that an actual average price per lottery ticket for said group of lottery tickets is not less than said desired average pricing;

10 computing a price for a lottery ticket in said group of lottery tickets based, at least in part, on an amount of change due to a customer;

providing said customer with an offer to purchase said lottery ticket at said computed price;

15 receiving from said customer an indication of said customer's acceptance of said offer to purchase said lottery ticket at said computed price; and

providing said lottery ticket to said customer.

27. The system of claim 26, wherein said method further comprises: associating a non-monetary prize with said lottery ticket.

28. A computer system for selling a lottery ticket, comprising:

20 means for computing a price for a lottery ticket based, at least in part, on an amount of change due to a customer;

means for providing said customer with an offer to purchase said lottery ticket at said computed price; and

25 means for providing said lottery ticket to said customer upon receipt of an acceptance from said customer of said offer to purchase said lottery ticket at said computed price.



29. The computer system of claim 28, including means for associating a non-monetary prize with said lottery ticket.

30. A system for selling lottery tickets, comprising:  
a first database including information associated with inventory of one  
5 or more stores;  
a second database including information associated with one or more  
lottery tickets; and  
a terminal having access to said first database and said second database  
and adapted to perform a merchandise transaction and a lottery ticket  
10 transaction.

31. The system of claim 30, further comprising:  
a store server in communication with said terminal wherein said second  
database is scored on said store server.

32. The system of claim 31, further comprising:  
15 a lottery server in communication with said store server.

33. The system of claim 32, further comprising:  
a third database including information associated with one or more  
lottery tickets, wherein said third database is stored on said lottery server and  
said second database is a subset of said third database.

34. The system of claim 30, further comprising:  
20 a store server in communication with said terminal and wherein said first  
database is stored on said store server.

35. The system of claim 34, further comprising:

a lottery server in communication with said store server and wherein said first database is stored on said lottery server.

36. A system for selling a lottery ticket, comprising:

5 a store server having an inventory database and an offer database;

a lottery server in communication with said store server and having a ticket database; and

a terminal in communication with said store server, wherein said terminal is adapted to conduct a merchandise transaction and a lottery ticket transaction, wherein said terminal causes said inventory database to be updated in accordance with said merchandise transaction, and wherein said terminal is adapted to cause said offer database to be updated in accordance with said lottery ticket transaction.

37. The system of claim 36, wherein said point-of-sale terminal is further

15 adapted to cause said ticket database to be updated in accordance with each lottery ticket transaction.

38. The system of claim 36, wherein said offer database comprises a subset of said ticket database.

39. A method for selling lottery tickets, comprising:

20 maintaining a first database of available lottery tickets;

conducting a merchandise transaction with a customer during which an amount of change due said customer is determined;

offering said customer an opportunity to purchase at least one of said available lottery tickets at a price based, at least in part, on said amount of change due said customer; and

25

providing said lottery ticket to said customer and updating said first database if said customer accepts said offer to purchase said lottery ticket.

40. The method of claim 39, further comprising:

maintaining a second database including information about available lottery tickets, wherein information in said first database includes at least a subset of the information in said second database.

41. The method of claim 40, further comprising:

storing said first database remotely from said second database.

42. The method of claim 39, further comprising:

maintaining an inventory database and updating said inventory database in accordance with each said merchandise transaction.

43. The method of claim 39, further comprising:

establishing a probability of being a winning ticket for each of said available lottery tickets.

44. The method of claim 43, wherein said probability of being a winning

ticket is based, at least in part, on said amount of change due to the customer.

45. The method of claim 39, further comprising:

establishing a win value for each of said available lottery tickets.

46. The method of claim 45, wherein said win value is based, at least in part,

on said amount of change due to the customer.

47. The method of claim 39, wherein at least one of said available lottery

tickets is an instant win style lottery ticket.

48. The method of claim 47, further comprising:  
associating a non-monetary prize with said instant win style lottery  
ticket.

49. The method of claim 47, further comprising:  
5 maintaining an inventory database; and  
updating said inventory database when said instant win style lottery  
ticket is redeemed.

50. The method of claim 39, further comprising:  
establishing a minimum price for at least one of said available lottery  
10 tickets.

51. The method of claim 39, further comprising:  
establishing a maximum price for at least one of said available lottery  
tickets.

52. The method of claim 39, further comprising:  
15 establishing a win value for said lottery, wherein said win value is zero.  
if said lottery ticket is not a winning lottery ticket and said win value is based, at  
least in part, on said price of said lottery ticket if said lottery ticket is a winning  
lottery ticket.

53. A method for selling a lottery ticket, comprising:  
20 enabling a customer to initiate a merchandise transaction;  
computing a price for a lottery ticket to be offered to said customer  
during said merchandise transaction;  
providing said customer with an offer to purchase said lottery ticket at  
said computed price;

receiving from said customer an acceptance of said offer to purchase  
said lottery ticket at said computed price; and  
providing said lottery ticket to said customer for said computed price.

54. The method of claim 53, wherein said computed price is based, at least  
5 in part, on an amount of change due said customer.

55. The method of claim 54, further comprising:  
establishing whether said lottery ticket is a winning lottery ticket.

56. The method of claim 55, further comprising:  
establishing at least one of a monetary prize and a non-monetary prize if  
10 said lottery ticket is a winning lottery ticket.

57. The method of claim 53, wherein said enabling said customer to initiate  
said merchandise transaction comprises enabling said customer to initiate said  
merchandise transaction via a point-of-sale terminal.

58. The method of claim 53, wherein said enabling said customer to initiate  
15 said merchandise transaction comprises enabling said customer to initiate said  
merchandise transaction via a client device.

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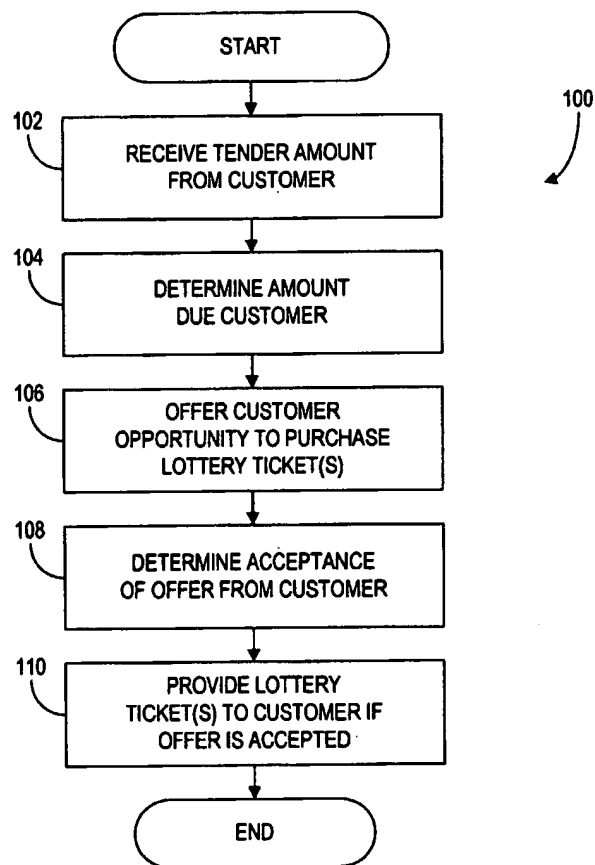


FIG. 1

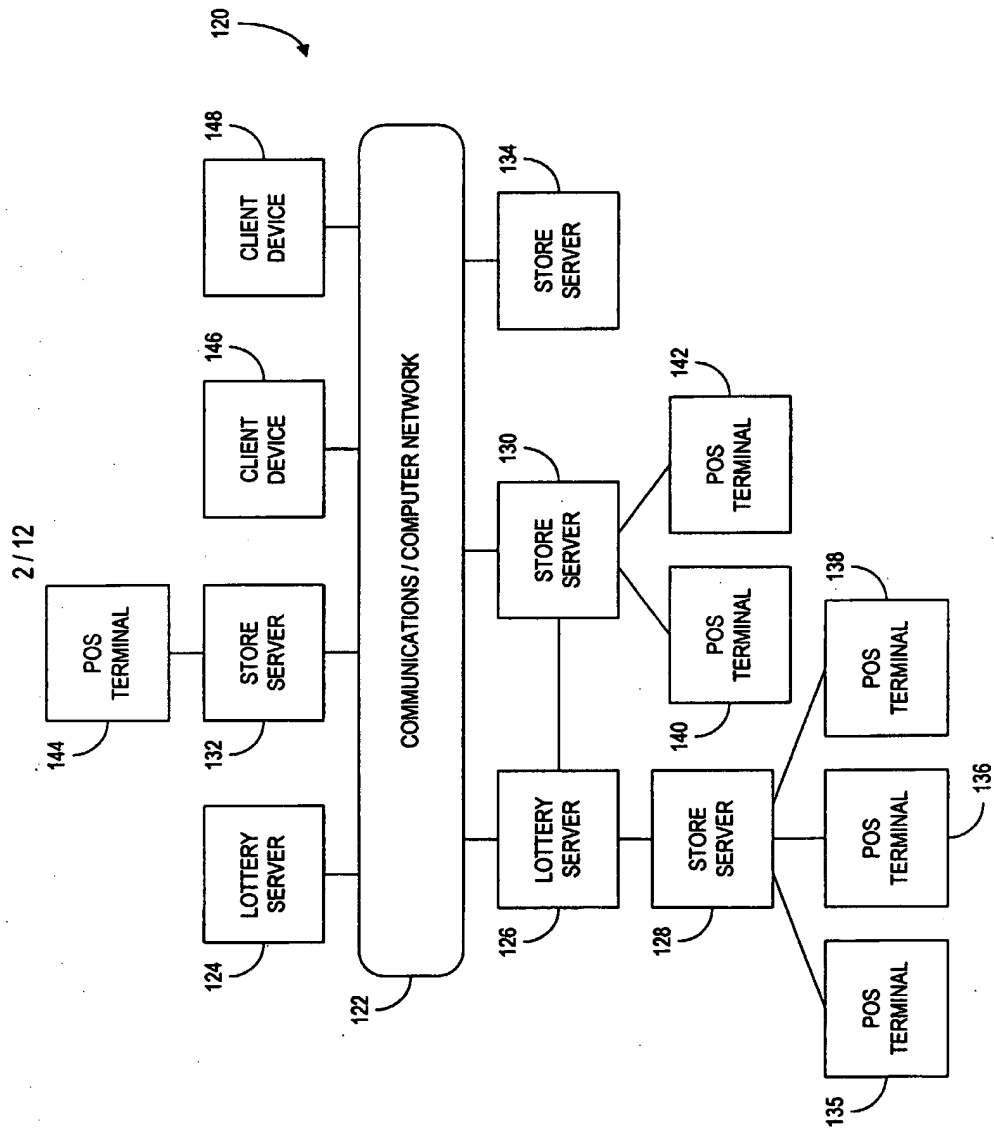


FIG. 2

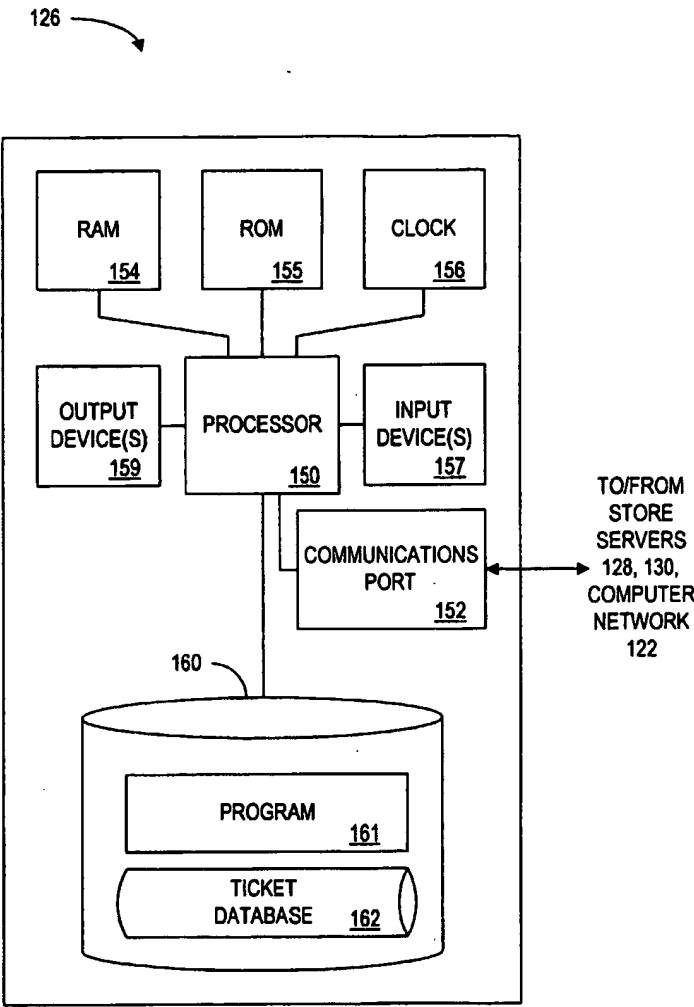


FIG. 3



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162  
↙

TICKET IDENTIFIER 164	TICKET OUTCOME 165	TICKET PRICE 166	TICKET PREMIUM 167	TICKET STATUS 168
T 1250	LOSS	\$0.46	\$0.00	SOLD
T 1251	LOSS	\$0.46	\$0.00	SOLD
T 2684	WIN	\$0.73	\$2.00	SOLD
T 2685	LOSS	\$0.73	\$0.00	SOLD
T 3975	WIN	\$0.93	\$50.00	SOLD
T 3976	LOSS	\$0.93	\$0.00	UNSOLD

FIG. 4

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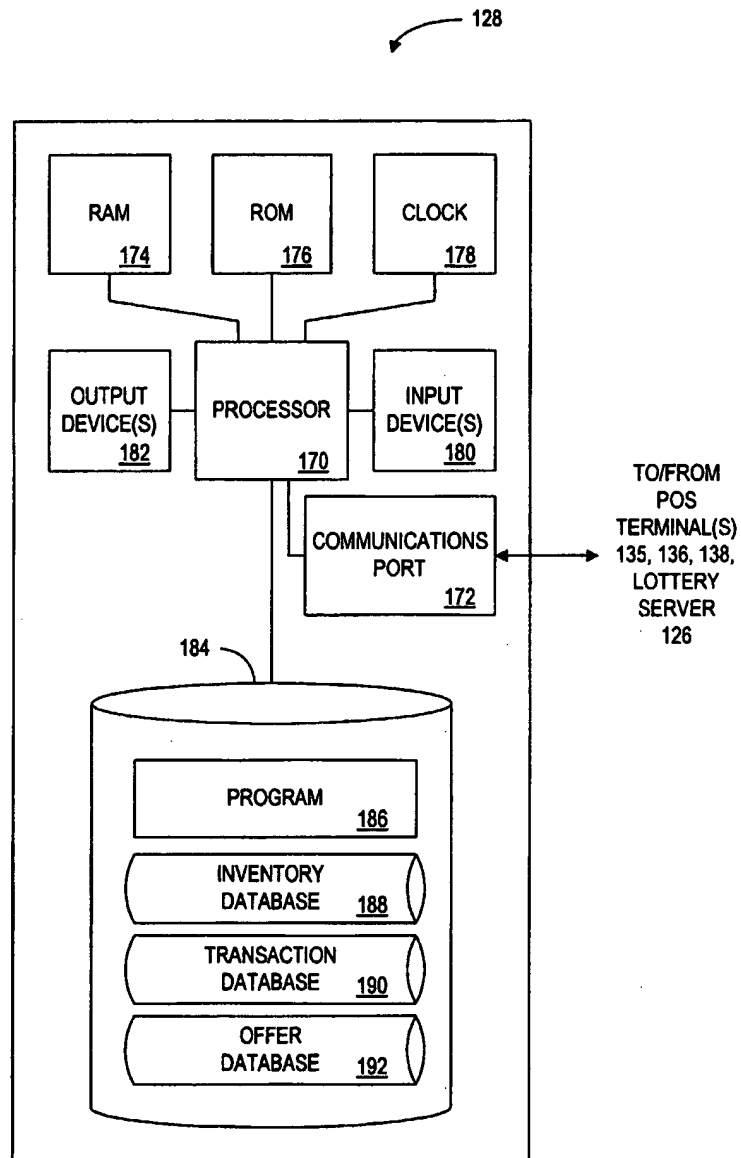


FIG. 5

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PRODUCT IDENTIFIER 194	PRODUCT FAMILY 196	PRODUCT DESCRIPTION 198	AVAILABLE QUANTITY 200	PRODUCT PRICE 202
GR 001	GRAINS	8 OZ. BRAND X BREAD	12	\$2.39
GR 002	GRAINS	8 OZ. BRAND Y BREAD	8	\$2.19
PR 001	PRODUCE	1 HEAD BRAND X LETTUCE	6	\$0.89
PR 002	PRODUCE	1 HEAD BRAND Y LETTUCE	9	\$0.89
LT 043	LOTTERY	\$0.43 INSTANT LOTTERY TICKET	N/A	\$0.43
LT 044	LOTTERY	\$0.44 INSTANT LOTTERY TICKET	N/A	\$0.44
LT 045	LOTTERY	\$0.45 INSTANT LOTTERY TICKET	N/A	\$0.45

FIG. 6

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TRANSACTION IDENTIFIER: 12345						<u>204</u>
POS IDENTIFIER: 08						<u>206</u>
TRANSACTION DATE/TIME: FRI. 5/21/99; 1:58 PM						<u>208</u>
PRODUCT PURCHASED 1 <u>210</u>	PRODUCT PURCHASED 2 <u>212</u>	PRODUCT PURCHASED N <u>214</u>	SUBTOTAL <u>216</u>	AFTER TAX PURCHASE TOTAL <u>218</u>	FINAL PURCHASE TOTAL <u>220</u>	
GR 001	PR 002	LT 052	\$3.28	\$3.48	\$4.00	

FIG. 7

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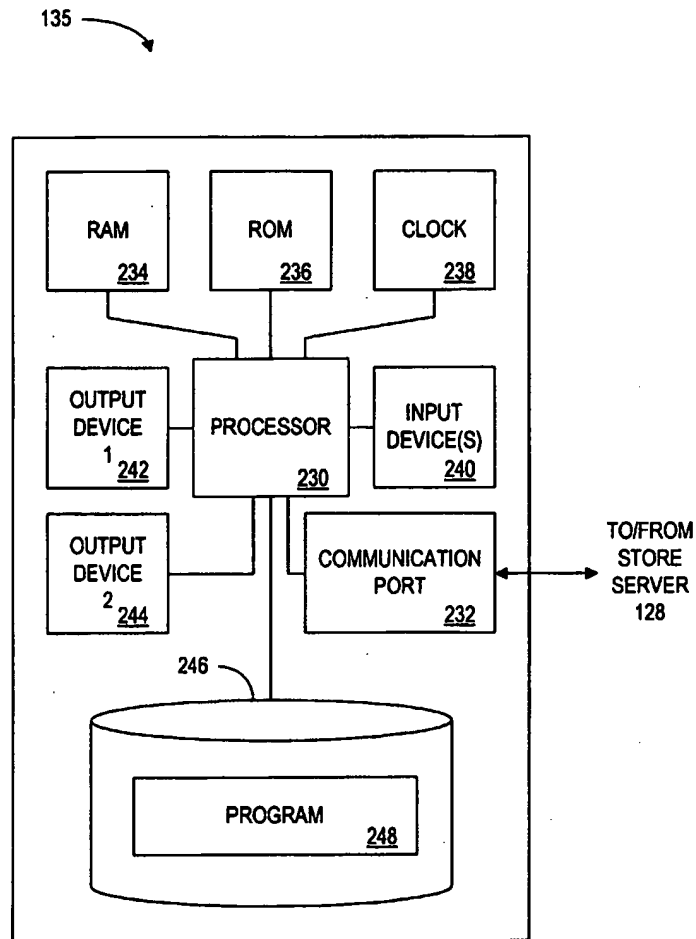


FIG. 8

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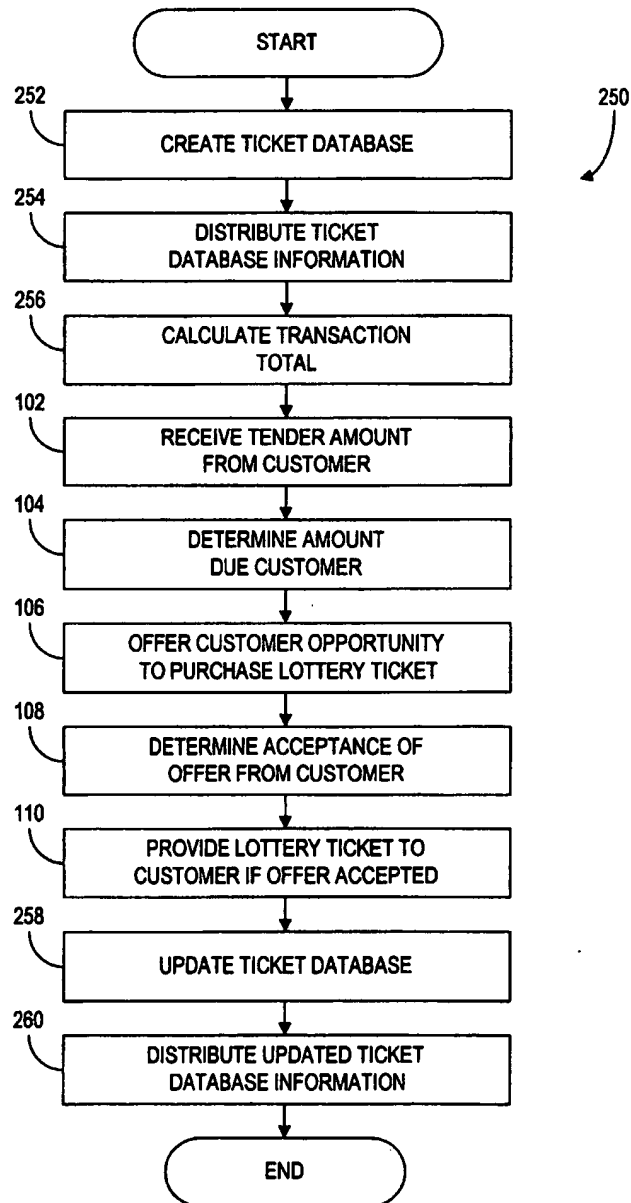


FIG. 9

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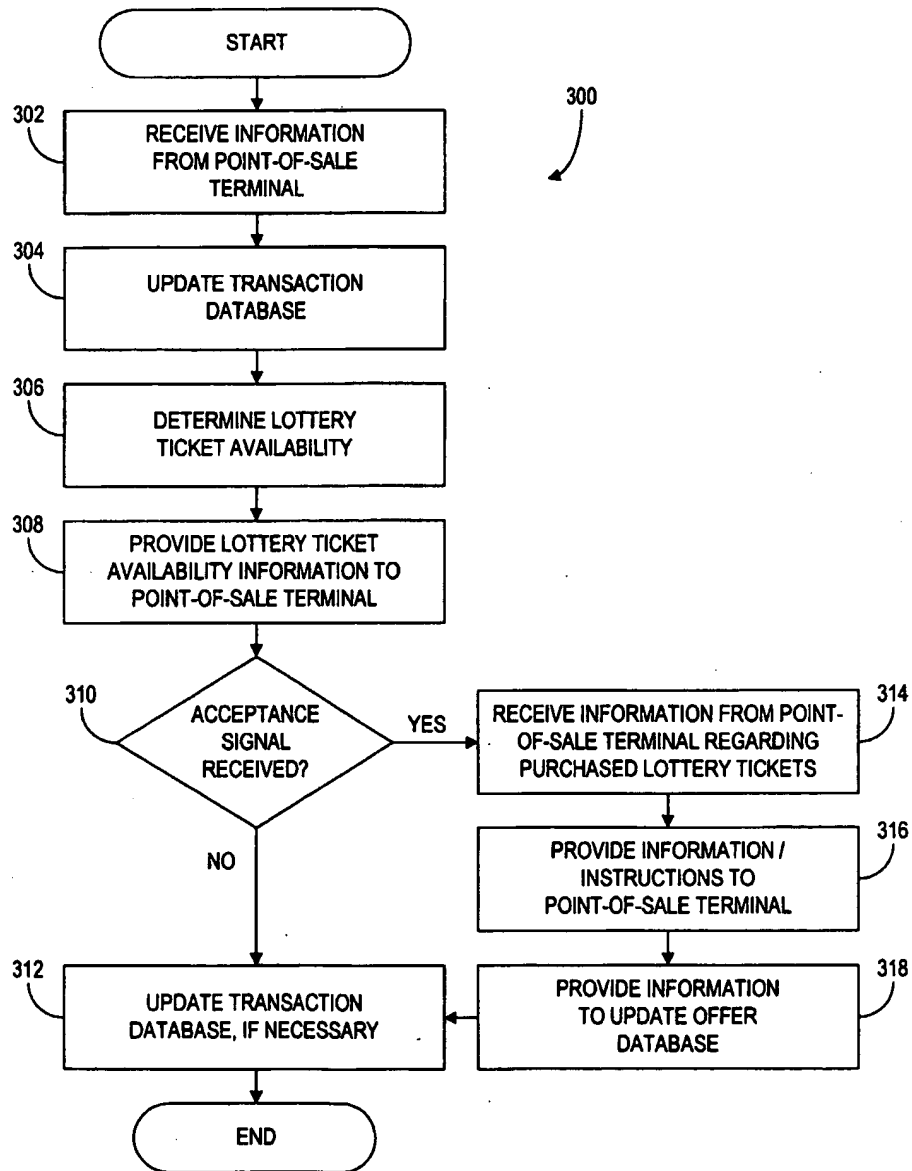


FIG. 10

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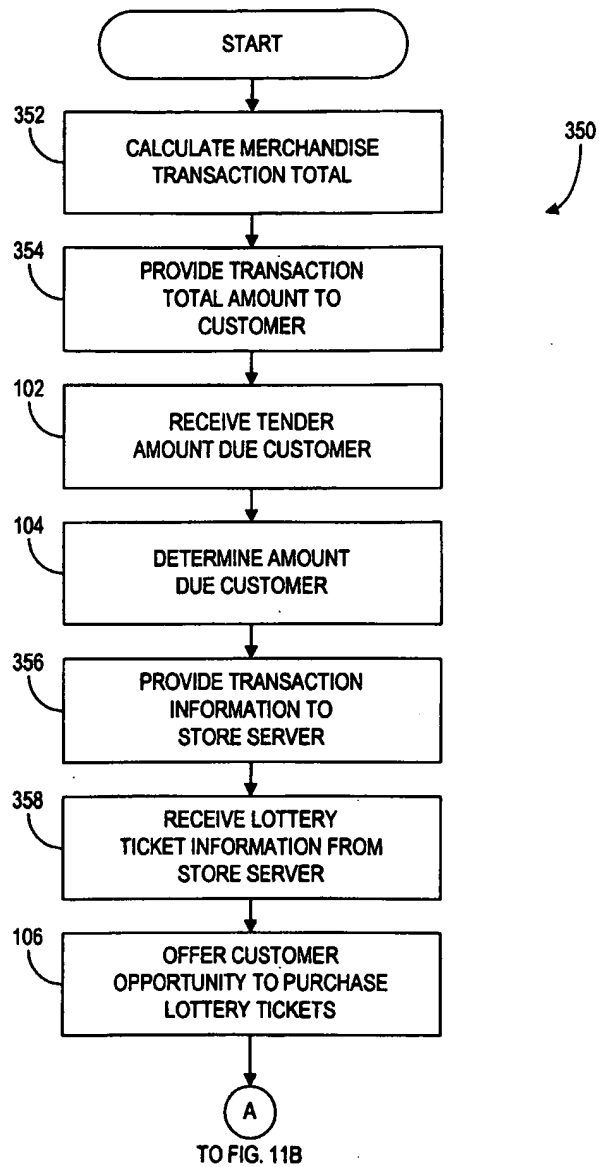


FIG. 11A



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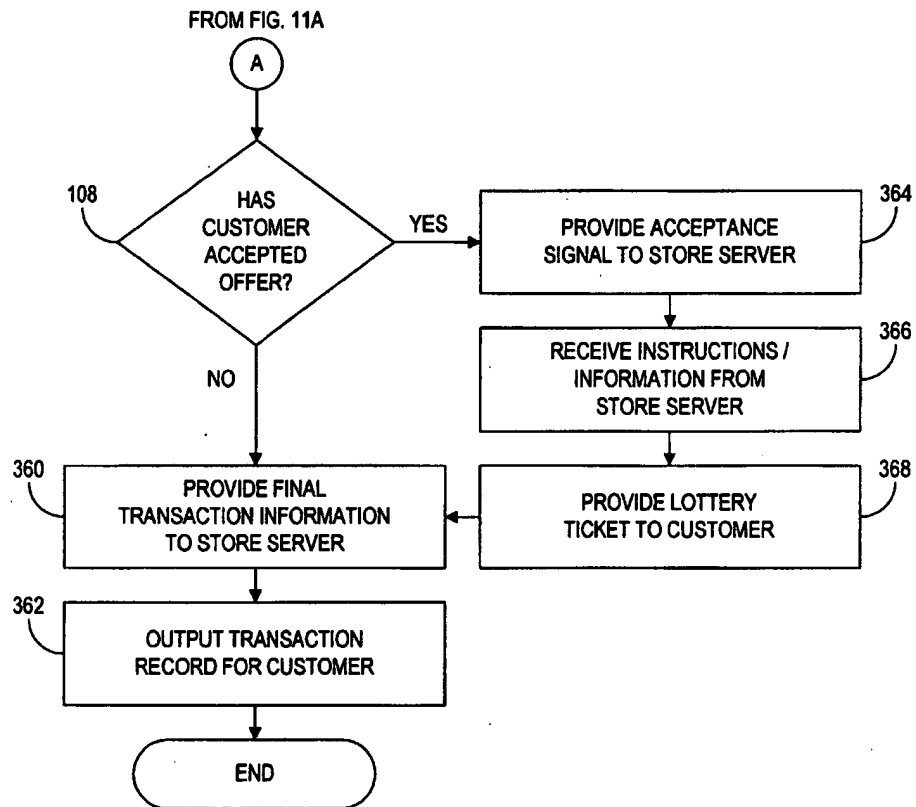


FIG. 11B

## INTERNATIONAL SEARCH REPORT

Int'l Application No  
PCT/US 00/21318

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G07F17/32 G06F17/60 G07G1/12 G07G1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G07F G06F G07G G07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 43149 A (WALKER ASSET MANAGEMENT LTD) 1 October 1998 (1998-10-01)	1-3, 11-13, 17-19, 24,26, 28,30, 36,39, 50-54,57
A	abstract figure 5 page 6, line 20 -page 7, line 5 page 9, line 14 - line 20 page 11, line 3 - line 16 page 14, line 5 -page 15, line 7 page 22, line 15 - line 20 page 32, line 21 -page 33, line 7 page 45, line 10 - line 16 page 48, line 14 - line 20 page 67, line 3 - line 8 page 77, line 12 - line 21 -/-	4-10



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "O" document referring to an oral disclosure, use, exhibition or other means
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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

15 November 2000

Date of mailing of the international search report

22/11/2000

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Lindholm, A-M

## INTERNATIONAL SEARCH REPORT

Int'l Patent Application No.

PCT/US 00/21318

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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A	page 13, line 29 -page 15, line 21	26,30,36
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A	US 4 854 590 A (JOLLIFF DANIEL ET AL) 8 August 1989 (1989-08-08)  the whole document	1,19,24, 26,28, 30,36, 39,53

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